



# THE CULTIVATOR.

FORBES.

VAN VRAKEN, N.Y.

THIRD

To Improve the Soil and the Mind.

SERIES.

VOL. I.

ALBANY, JULY, 1853.

No. VII.

## Diffusion of Agricultural Information.

**T**HE present condition of the United States presents certainly a picture nowhere else to be found on this huge globe of a thousand million inhabitants. The country has now become one broad territory, extending from the Atlantic to the Pacific, and from the frigid to the torrid zone. On this wide, rich, and new region, an immense tide of immigration is pouring, and spreading over its surface. New national resources are thus created, new demands are made upon the necessaries and luxuries of life from the older cities, and the whole social and commercial structure is springing up and growing at such a rate as fairly to startle one from the ordinary track of thought, as every successive census exhibits the enormous growth, promises the round number of a 100,000,000 people only half a century hence.

There are several thoughts which such a view irresistibly suggests to every one, who feels any interest in the future destiny of the country and its people. A prominent one, and the object of our present remarks, is the condition of agricultural and rural improvement which shall then exist. It becomes an important subject of inquiry whether this extraordinary growth of population shall find comfortable and permanent subsistence, when every quarter section of land shall be snugly filled up. A prudent man, who finds his family rapidly increasing, very naturally feels an anxiety as to the way in which they shall all be fed; and those who take a little wider view, will look to the sources of supply which are to feed the great national family. According to the recent course of events, much of the rich patrimony which had fallen into the hands of this family was in a fair way to become squandered; the great national estate was cultivated in a very wasteful and profitless manner, diminishing the wealth of the soil, instead of carefully maintaining or increasing its value by prudent management, by saving manures, and economical rotations.

There is much in the history of the past that is fraught with instruction. It was not many years since the great majority of all the newer lands in the country that had been cultivated twenty years, were deteriorating at a fearful rate, in consequence of the bad system of management. As the soil became ruined in the older states, the population, in accordance with the ruling passion or fashion of Yankee character, migrated to newer and richer lands, which were in their turn to be sacrificed in a similar manner, and abandoned. It has been found by census returns, that while the towns and cities generally in the older states have rapidly increased, indicating the sagacity and energy of commercial men, the population of most agricultural districts has been about stationary, and in some instances has actually diminished, showing no improvement whatever in farm management.

A shrewd writer has made the estimate that of the twelve million of cultivated acres in the State of New-York, eight millions in the hands of "skimmers," whose object was to get all they could from the soil, principal and interest, instead of trying to increase the interest by augmenting the principal,—three millions in the hands of farmers who managed them so as barely to hold their own, and only one million, or one-twelfth, cultivated so as to maintain a high or increasing degree of fertility. We have no doubt that the latter number is yearly becoming greater, and that the skimmers are rapidly diminishing. In Western New-York, more especially, there is a positive improvement; the wheat crop has decidedly increased in its average product, to an amount, as some have estimated, of ten bushels more per acre, in some ten or fifteen years. The cause of this increase is a very interesting subject of inquiry. There is no question that it is the result of radical improvements in the practice of farming, and more particularly in a less exhausting succession of crops, in improved varieties of grain, in deeper and more thorough tillage through the assistance

of improved plows; in a more careful saving of manures, as their increased price in many towns and large villages fully attests; in the more general introduction of underdraining, imperfect as it is in most cases, and in the increased use of the wheat-drill.

These improvements have been chiefly effected through the agency of agricultural periodicals. If there is a single bad farmer—one who is retrograding or stationary, who is exhausting his land, or making a scanty living by shiftless husbandry,—who regularly reads such a paper, we have not seen him. On the contrary, we do not know a single practical farmer, who is a constant and interested reader of a good farming periodical, who is not much in advance of his non-reading neighbors. More than this, we are confident there is not one in twenty, who shows unmistakable marks of thrift on his premises, who does not keep up with the agricultural intelligence of the day, directly or indirectly, derived from reading. Agricultural societies, it is true, have done their full share; but they owe their very existence, in most cases, to the constant stimulus of the press; and the useful facts which they develop would reach but very few, were they not borne on the wings of these myriad messengers all through the country. Valuable improvements, are made in farm implements; but their progress in use would be slow indeed, but for the thousand-tongued machine which points out their advantages and successful achievements to the retired farmers in every corner of the country. A vast amount of useful information was thrown open to the public by the trial of implements at Geneva; but not one in ten, probably, of the few hundreds of persons who witnessed the trial, were non-reading farmers, for why should *these* seek for more knowledge? By means of the agricultural press, that information was not confined to the few hundreds, but was thrown abroad for a hundred thousand readers.

There are a hundred millions of bushels of wheat yearly raised in the United States, worth eighty million dollars. An improvement is, perhaps, made in cultivation, or in the variety sown, which adds one bushel in twenty, without increasing the cost. The farmer who raises a thousand bushels, and who makes the discovery, is benefited forty dollars annually—equal to the interest on a capital of some six hundred dollars. He may perhaps communicate the discovery to a few of his neighbors, but the matter will here end or make very slow progress through the community. But if an agricultural press speaks to every farmer, the forty dollar interest and the six hundred principal, immediately swell to the enormous sum of four millions yearly, the interest on some sixty millions. Now, this is a single item in a great number; and although every man cannot at the present moment be reached, in consequence of the limited circulation of these papers, yet we have not the slightest doubt, that the multifarious improvements in the agriculture of our country, which have been already effected through the agency of the press, by improving all the different breeds of animals, modes of cultivation, varieties of seeds, and agricultural implements, have already amounted in the aggregate to a permanent value of many times sixty millions.

Can statesmen and patriots, then, who view with solicitude the mighty increase of the nation, as the great flood of human beings is rolling westward, and is gradually filling up the almost interminable

wilds of the west,—can they render a better service than the encouragement,—the strong, constant, efficient encouragement, of the diffusion of agricultural knowledge? The benefits thus conferred are not to be measured merely by the dollars and cents which they shall add to the value of national property, by the highly improved and profitable farms of its prosperous people, instead of worn-out and exhausted estates scarcely affording food for a starving population; a higher influence,—beyond the power of figures to estimate,—is the social and moral effect, inevitably resulting from the cultivation of comfortable and attractive homes. What an eminent blessing then—worthy of the preserving efforts of every patriotic citizen—would be the substitution of the literature of rural improvement, for the present almost universal spread of newspapers, bristling with angry politics; the one promoting peace and the pleasures of country life; the other the spirit of feud and contention, and a thirst for political office—a wide difference indeed in the influences to be exerted in impressing the developing character of a great nation, rapidly approaching in number the leaves of the forest for multitude.

#### Value of Guano.

Several of our correspondents having lately inquired relative to the value of guano, we give an abstract of a series of accurate experiments, reported some time since in the New-England Farmer, by Dr. KEENE of North Providence, R. I. They are the more valuable on account of the care used in arriving at the precise results, instead of the more common mode of vague guessing.

Exp. 1. Rye was sown broadcast in autumn, at the rate of 3 bushels per acre, for spring sowing. Early in spring, a compost consisting of one part guano mixed with three parts of dry loam, was spread on the ground at the rate of 320 lbs. per acre, costing seven dollars. The growth on this portion soon became the greenest, tallest, and thickest, and continued so. About the first of summer, a square rod of green food cut from the unmanured part, weighed 60 lbs; from the guanoed, 105 lbs. When matured, the unmanured bundles weighed 35 lbs. per rod; the guanoed, 44 lbs. The grain from the former weighed 10 lbs.; from the latter 16 lbs., being a gain of 6 lbs. per rod or 16 bushels per acre, which, at 80 cents per bushel, gives \$12.80, and the increase of straw at \$7 per ton, gives \$1.50, or a return of \$14.30 for seven dollars worth of guano.

Exp. 2. Grass—old meadow—the guano compost applied early in spring at the rate of 320 lbs. guano per acre, or \$7; another portion top-dressed with compost well mixed of equal parts of cow-dung and peat, sixteen loads per acre, costing \$24. The guanoed portion soon surpassed the other in tallness and thickness—and when weighed, the guanoed part yielded 62 lbs. hay, nearly dry, and the other 42 lbs—a balance of 20 lbs per rod or about a ton and a half per acre, of partly dry hay, in favor of the guanoed portion at \$7, over that treated with barn compost at \$24.

Exp. 3. Grass—guanoed as before mentioned—another portion left untouched. The guanoed yielded 60 lbs. per rod, the unguanoed 32 lbs.

Exp. 4. Grass—low, reclaimed meadow, manured three years before with 30 loads barn compost per acre. A guanoed rod (320 lbs.) yielded

115 lbs. of green, dewey grass, and an adjoining unguanoed rod, 62 lbs.

Exp. 5. Corn, sown in drills, 2½ bushels per acre—one portion with barn compost dropped in the drills, six loads (value \$9) per acre; the other guano compost, 320 lbs. per acre (value \$7)—the latter brought the plants up first, and maintained a decided superiority. A rod of the guanoed part cut and weighed green, weighed 450 lbs.; a rod of the other 365 lbs.—gain for guano, 85 lbs. per rod.

We have elsewhere stated that a hundred pounds of guano may generally be reckoned as worth one load of good stable manure,—in the above experiments it exceeded this, after allowing for half mixture in the barn compost. The most striking superiority was in the application to grass, where the guano, no doubt, penetrated among the roots more readily than the fertilizing parts of the barn manure. Guano is often badly applied, and produces no valuable results, and spurious or worthless articles are sometimes sold under this name.

In all experiments to test the comparative value of manures, the most clear and intelligible results are obtained, by measuring them out so as to give an *equal cost* of each, on equal portions of land—if for instance, 400 lbs. of guano cost \$10, then ten loads of barn manure at one dollar per load, should be applied by way of a comparison of the results, which are thus placed in a distinct form before the experimenter. In such trials, it will be remembered that concentrated manures, such as guano, have a decided advantage in the diminished cost of spreading, which must be accurately taken into the account when comparing with more bulky fertilizers.

#### Agricultural Chemistry.

MESSRS. EDITORS—I notice by your paper of yesterday, that Dr. J. S. HOUGHTON of Philadelphia, is out against both you and me, on account of my chapter on "Practical Farming."

I did suppose until recently, that chemists could ascertain by analysis, whether soils did or did not contain the ingredients necessary for the production of the different kinds of grain; but I now think very differently. I will state one fact which influenced this change of opinion.

About three years since, a number of the best farmers in this county, were having their soils analysed, and I thought I would do the same. I selected my sample of soil from a forty acre field, from which I had taken a crop of Indian corn two years in succession, it having been highly manured with barn-yard manure, the fall previous to the first crop. Both corn crops were good—the first the largest. I thought the whole field almost too rich for wheat, after fallow, and I had no doubt the analysis would make the field stand A. No. 1. But I was surprised, when I received the analyses, to find that it was deficient in many things, and almost destitute of other necessary constituents of a fertile soil. The chemist, however, sent me a prescription, which I was to apply, and which he said "would remedy the difficulty it was laboring under."

Now I knew it was not laboring under any difficulty. I tilled the field well, sowed it to wheat, and it produced one of the best crops in all this wheat-growing district. I sold about 800 bushels of it to G. Markel & Co., of Waterloo, and Gen. Markel told many men, farmers and others, that he had not ground so good wheat in many years,

and that he never saw a better quality of flour than was made from it. Neither Gen. M. nor any one else but myself, knew anything of the analysis of my soil, but he attributed the large crop and fine quality of the wheat, to the fact that the field was under-drained.

Every farmer knows, or ought to know, that barn-yard manure furnishes all the elements of nutrition that are needful for any grass or grain that is grown in the northern latitudes, and I presume in southern also. It is true that if you manure highly with barn-yard manure for a number of successive years, that the straw will grow soft and weak, and the grain shrink; but this may be remedied by the application of lime, at the rate 40 to 80 or 100 bushels per acre. This will give a more elastic straw, and a brighter and plump seed. But to apply only three to six bushels per acre, as recommended by some chemists, would be like giving a horse or an ox a gill of corn for a feed—its effect could not be perceived. The application of a barrel of salt per acre, to lands thus highly manured for years, will produce a similar effect, rendering the grain plump, and the straw bright and elastic.

Dr. Houghton may possibly think we were hoaxed, and that the gentleman who analysed our soils was not a chemist; but I know that he stands high as a chemist, and an *agricultural* chemist too, in the eastern cities, and if I am not mistaken, he also lectures on agricultural chemistry.

If these chemists will come among the farmers of Western New-York, and show us by the practical operation of their prescriptions, that they can raise better crops than we do, I doubt not they would find plenty of employment; but until they can do this, or at least distinguish between a highly fertile and nearly barren soil, I would advise farmers to rely more upon their own judgment and observation, than upon the results of their analyses.

I have from my youth advocated "book farming," but books and papers have now become, like chemists, too plenty. Much is inserted in them, which is absurd to a common-sense farmer. Yours truly. JOHN JOHNSTON. Near Geneva, May 18.

#### Treatment of Peat Swamps.

MESSRS. EDITORS—Is a clear peat muck soil well adapted for the growth of "Osier Willow"?

Would it after draining, produce clover, timothy, and other grasses well?

In draining such a piece, say 40 acres, where a good outlet can be made, would I not be most successful by cutting the drain around the whole, (having proper descent of course to the outlet,) thereby preventing the constant feeding from springs in the surrounding upland? There are two or three places, where from holes two feet in diameter, boils up water from beneath the ground. The depth of these places has not been ascertained. A common-length rail will not reach bottom. Some say this soil is worthless without a mixture of sand. It has never been thoroughly tested, being too wet to receive a plow, except in very dry seasons. This muck is black, extending to great depth. I do not wish to expend money in its improvement, without some assurance of being repaid. Any information, therefore, which you or your experienced contributors may have on the above points, would be thankfully received through

the "Country Gentleman." A SUBSCRIBER.  
New-Fairfield, Conn.

In reclaiming a peat swamp, and bringing it into profitable cultivation, the first and chief requisite is to have it well drained—or at least so as to reduce the water eighteen inches or two feet below the surface of the muck. If the water flows down from the surrounding upland, an open ditch will cut off such as runs over the surface, or an underdrain will intercept that which runs only a foot or two beneath, on the surface of a harder subsoil. But if the subsoil be gravel or loose sand, allowing the underground streams to run at all depths, and in various directions, the side-hill drain will be of but little use, and the water must be wholly drawn from the swamp itself.

After the swamp is drained, pare and burn the sods at such a time that the peat below will not take fire—spread the ashes—if practicable, put on a good dressing of compost, having at least one-half loam, and sow with red-top and clover—timothy or herds grass will do, if the other cannot be obtained. The peat ashes will answer an excellent purpose in improving the soil, but should the paring be deemed too expensive, let the whole at a dry time, be thoroughly harrowed, and then cart on two or three inches of loam, and sow the grass seed. The peat will grow good corn and broom-corn, and doubtless the Osier Willow, after a thorough draining, with no other preparation than clearing the rubbish, and subjecting it to ordinary cultivation. But as such a porous soil is peculiarly liable to frosts, an early ripening variety of corn must be planted late, so as to escape late spring and early autumn frosts.

It sometimes happens that the plowing can be done to great advantage on a soft swamp, while it yet remains frozen hard, except when a few inches of the surface is thawed in early spring.

The most thorough and perfect treatment is undoubtedly the cheapest, and some of the most valuable meadows in the country consist of reclaimed swamps, yielding three or four tons of good hay per acre. The formation of a strong turf gradually fits the soil for other crops, and ultimately good wheat crops have been obtained on such lands.

#### Large Root Crops.

At a late meeting of the Executive Committee of the Litchfield Co. (Con.) Agricultural Society, the following premiums were awarded for the best acre of root crops:—

##### RUTA BAGA.

1. To John T. Andrew, West Cornwall,..... 1,272 bu.
2. To T. S. Gold, Ag. School, Cornwall,..... 1,184

##### CARROTS.

1. To Abraham Beecher, Bethlehem,..... 1,416
2. To Albert Wadham, Goshen,..... 1,344
- Crop of N. Hart, Jr., Cornwall,..... 936

##### TURNEPS.

1. To John T. Andrew, West Cornwall,..... 2,102
2. To A. Beecher, Bethlehem,..... 924
- Crop of H. M. Hart, Cornwall,..... 688
- Crop of J. M. Wadham, Goshen,..... 660

The turnep crop of J. T. Andrew, (2,102 bushels per acre) is thought to be the largest ever reported in this country. Most of the other crops are very large. We would thank the above named gentlemen to furnish us with their mode of culture, for publication. In England, root culture is much practiced and highly approved by the best agriculturists. In this country the subject is at-

tracting the increased attention of farmers, and it well deserves more consideration than it has heretofore received.

#### Culture of Indian Corn, &c.

MESSRS. EDITORS—I have read the several articles which have appeared in the *Country Gentleman*, on the culture of Indian corn. I differ with my friend of the north, in regard to the time of plowing as well as the mode of manuring for this crop. Instead of plowing in the spring, I would plow late in the fall, and to the depth of ten to eleven inches, laying the furrows at an angle of at least forty-five degrees. This will expose a large quantity of the subsoil to the action of the frost, and may even penetrate to the bottom of the furrows, as they are not thrown over flat. I consider the action of the frost indispensable to the improvement of stiff clays, as they will thus become disintegrated, and mingle freely with the top soil, and thus improve it very much. We use altogether the left-handed plow, and to enable us to plow to the depth mentioned, the lower part of the beam and the lower part of the share ought to be at least 18½ inches apart, with a wheel that will keep it exactly at the depth desired. By adding a little width to the mold-board, and letting it extend out with a curve so as to just scrape along the edge of the furrow, it will fill the cavity between the furrows, and make the field look like a bed in the garden, and this ought to be the object of the plowman.

As to manure, I would not turn it down, with an eight-inch furrow laid flat over it. In some lands I should think such a course quite wrong. After the plowing is done in the fall, I would haul out the manure at any time during the winter or spring, and spread it evenly over the ground; and, when the ground is in a suitable condition, thoroughly mix the manure with the top soil with a double shovel plow, a two-horse cultivator or a gang-plow. It is well known to all men of experience, that everything put on the land, such as manure, lime, guano, bone-dust, and everything else that is soluble in water, has a downward tendency, and therefore ought not to be buried eight inches deep. But some will say the corn will find it. That may be; but how much of it will the next crop of wheat, and the grass sown with it, find? I am as much opposed to hauling out manure, and leaving it exposed to the sun and rains of summer, as I am to burying it too deep in the earth. Farther, I have no objection to plowing it under four to five inches for wheat.

The only proper time for deep plowing is in the fall, or just before frost sets in. It is the only time it can be done to the depth required, which, as I have said, is about eleven inches. To turn up a heavy subsoil, at any time from March to November, would be wrong.

I differ with my friend about hillling corn, in order to throw out props. This I would prevent if I could. I would rather have it propping up about the ear than at the ground. Another thing, I think it wrong to plow among corn when it is near tasseling. It is too late. Plowing at this time tears the roots, and injures the growth of the corn. I consider plowing corn at any time, of no use. The double shovel, or cultivator, is all sufficient. After the corn is two feet high, the roots ought not to be disturbed by plowing.

W. T. TODD.

Utica Mills, Md., May 15, 1853.

## Seed for Large Crops of Oats.

MESSRS. EDITORS—I hold that we practical and reading farmers, whenever we discover in your correspondents, what we deem to be an error, either in theory or practice, we should inquire into it, and learn the whys and wherefores of what we cannot approve until further explained, or we become better enlightened upon the subject.

In the May No. of the Cultivator now before me, in a description of crops in Caledonia county Vt., your correspondent says: "many of the farmers are in favor of heavy seeding with oats, where the land is rich and well prepared. Five and six bushels are commonly sown on an acre. Large crops are raised in this county; the average yield per acre is about sixty bushels. The best farmers get from 75 to 100 bushels."

The yield here spoken of indicates a strong soil and a high cultivation; but why this large, and with us, *uncommon* seeding? There must be some peculiarity in the soil, or in the kind of seed used, or the result would be a much less crop by such an abundant over seeding. My location is upon the alluvial bottom lands on Connecticut river, a soil not surpassed in the world for corn, oats and grass. Caledonia is also a river county, though about one degree further north. I probably prepare my lands for a crop, as well as most farmers in Vermont, and was formerly in the habit of sowing three and three and a half-bushels to the acre, but experience has taught me that *two* bushels to the acre is better than any larger quantity, especially whenever I am desirous of seeding down to grass with the oat crop, which with me is pretty generally the case; and I never fail of a good catch of the grass, and a heavy crop of oats, or what we call here a heavy yield, from 60 to 80 bushels per acre.

My experience is this. Whenever I have seeded with three bushels or over to the acre, in a soil of high tilth, the stalks grow thick and close, and not having sufficient space to expand, they do not attain strength enough to hold themselves up, but fall down upon the ground, as the heads begin to fill, smothering the young and tender grass, the straw rusting; and not unfrequently another short, green crop of oats will be found springing up through the first growth of straw, and a partial if not a general blight of the whole crop. But with a seeding of two bushels to the acre, the straw expands, becomes strong and vigorous, holds itself up until the heads mature, and are of great length, well filled, the kernel plump and heavy, and whenever the straw does fall, it is but partial, not flat, and the grass seeding is saved. I know there is much in the seasons; a wet time, heavy showers and wind, or a severe and protracted drouth, all effect this crop; but the seeding with five or six bushels to the acre on our river soil, would be sufficient of itself to destroy all hopes of getting the first bushel of *merchantable* oats in return.

It is very probable that upon the elevated lands in Caledonia county, the soil and the climate being colder than here, lying full one degree north, that a heavier seeding is required; the growth is less rapid and the crop does not mature so early; yet I cannot divest myself of the opinion that this seeding with five or six bushels to the acre, in any locality, or upon any soils in Vermont at least, is an extreme that might as well be avoided.

J. W. COLBURN. Springfield, Vermont, May 3.

## Nitrogen in Plants.

The source of nitrogen in plants, has long been a theme of discussion among scientific men, and has a most interesting connection with agriculture. The atmosphere is four-fifths nitrogen, and we know that the leaves of plants have the power of absorbing some gases from it, (carbonic acid, for example,) decomposing them, and using a part or the whole in the vegetable economy; and in this way we might suppose that nitrogen would also be assimilated.

Priestly, and others, quite early in the history of organic chemistry, advanced this as the source, and many to the present day have believed that a *part*, if not the whole, might be derived in this way.

This gas forms a part of many very energetic compounds, yet in its pure state it is decidedly negative in its properties. Its affinities feeble, and it is not prone to form direct combinations. This was noticed, and hence doubts arose as to its being able to directly aid the plant in its growth. De Saussure proved that ammonia existed in the atmosphere, and suggested that as the source from which nitrogen was obtained. It was afterwards found in rain water.

Experiments soon proved that its compounds were decomposed by plants, and were valuable fertilizers. Hence the use of guano and other manures, which either contain it, or yield it by decay, has become general and extensive. Some have also supposed that the *nitrates* would yield to vegetation the nitrogen of their nitric acid.

Concerning these opinions, the chemical world has long been agitated, and agriculture has felt this agitation. Each theory has been defended by men of profound learning and great celebrity, without either being able to prove, by satisfactory experiments, his theory, until very recently the experiments of a young French chemist, M. Ville, have decided the question. I have seen no mention of it in our agricultural papers, so I will give the leading features of the experiments and their results, from a published communication of Leon Toucaud, in October last, only translating the parts of most general interest.

The apparatus consisted essentially of a large bell glass, with an attached *aspirateur*, also of large dimensions. Within the bell glass, in pots, some seeds were planted in white sand, to which had been added a quantity of the ashes derived from the same species. The pots were supplied with *distilled* water. Each day the aspirateur caused a known volume of air to enter the bell; a small quantity of carbonic acid was also supplied, sufficient for the wants of the plant. Simultaneous with the operation of this apparatus, another experiment was conducted to determine the amount of ammonia in the same quantity of air that was admitted to the plant in the bell, while it was undergoing the successive phases of its growth. In some of the experiments, small but known quantities of ammonia were introduced in solution in the water; but in all the experiments noted, at the conclusion the plants were analysed and found to contain *more* nitrogen than existed in the form of ammonia in the air, and in the water which had been added, or by the decomposition of the original seeds. This was the nature of the experiments in 1849 and '50. In 1851 the experiment was changed. All the air admitted to the plant was deprived of its ammonia, by first passing it through sulphuric

acid, and afterwards through a solution of bicarbonate of soda. Under these circumstances the plants grew, and were found to contain much more nitrogen than was contained in the original seeds, which excess must have been drawn from the air. In 1852 these results were confirmed by further experiments. The plants fructified completely, and their nitrogen, when matured, was more than in the seeds planted.

"The conclusion then is, with all the certainty that belongs to an experimental science, that the nitrogen of the air is absorbed by plants and serves in their nutrition, and that the cereals are not an exception in this respect."

Although this settles the question of science, it does not show that ammoniacal manures are not valuable. Practical agriculture has too long decided that they are; hence, though a part of the nitrogen may, under certain circumstances, be derived from the air, other sources appear to be the most favorable to the luxuriant growth of our cultivated plants, and guano and other nitrogenous manures will perhaps be used with success in increasing the yield of our fields, while the soil is tilled, and man derives from it his support. Yours truly, WM. H. BREWER. *Ovid, Seneca Co., N.Y.*

#### Making and Saving Manure.

The great object to be obtained, in preserving horse stable manure in good condition, in my opinion, is to prevent its heating, which causes great injury and waste. The plan suggested by D. B. K., in the May No. of the Cultivator, which is to spread it over the farm-yard, as well as that of Composter in the Feb. No., which is to throw it into a yard, and to cause his hogs to mix and turn it over, is a decided improvement over that of throwing it in a pile out side the barn, to rot and waste by rains, and also evaporate by the wind and rays of the sun. Yet by neither of these plans is the washing and evaporation obviated.

All stable manure should, as far as possible, be kept under cover. Sheds for manure, contiguous to stables, can be built at small expense, into which the daily clearings of the stable should be thrown. I have a stable for sheep attached to my horse barn, 26 by 18 feet, without a floor, into which I throw my horse manure, and spread it over the stable. Thirty or thirty-five sheep use this stable at pleasure. In bad weather they are fed there in racks around the walls. The sheep keep the manure trampled down hard, so as to prevent any degree of heating. The litter from the racks keeps the stable in good condition for sheep.

I am fully satisfied that my horse manure treated in this manner, is worth double what it was when thrown in a pile out side of the barn, and left to heat, wash, evaporate and waste, until its remains were given to the earth.

In autumn I usually take up my stable floors, and deposit a layer of coal dust about six inches deep under them, which by spring becomes thoroughly saturated with urine. In this way I make two or three loads of manure every winter, equal to, if not better, than that thrown from the stables.

I apply all my stable manure to the soil in the spring, plowing or harrowing it immediately after getting it to the field. I would never draw it to the field until every thing was ready to mix it with the soil. Manure is often injured and wasted by

permitting it to remain in small heaps on the field several weeks before it is used. SAMUEL F. WEST. *Columbia, Ct., May 3, 1853.*

#### Investments in Weeds.

It is some six thousand years since weeds became a serious and positive evil; yet if we should judge from the undisputed empire which they appear to have obtained on some men's domains, we should very naturally suppose that this long period had not been sufficient to reveal the fact. Elders, thistles, mulleins, johnswort, red root, chess, cockle, fox-tail, pig-weed, mustard, ox-eye, &c., consume as much of the strength of the soil on some single farms, as would furnish grain for the family's yearly supply. We have heard of many bad investments of capital, from the South Sea scheme, a century or more ago, down to the multicaulis speculation of a later day, and railroads whose only dividends were the old iron originally used in making them. But South-Sea bubbles, multicaulis humbugs, and grass-covered railroads have not consumed a tithe of the money lost every year by the mighty legions of foul materials in the shape of weeds, which are secretly and openly devouring the strength of the soil in all quarters of this round globe, wherever cultivation has turned up the soil to the sun.

We do not propose to say anything new on the subject of an evil that existed even "before antiquity appears to have begun;" but perhaps we may make a few suggestions of some use, at the present juncture, when the weeds are approaching the height of their vigor, and to which the wetness of the season in many parts of the country has imparted unusual strength.

"How shall we destroy them?" This is an interesting question, but there is no "royal road" to their eradication; it must be accomplished by vigilance and labor. There are, however, different modes of attack—some laborious and expensive, and others comparatively expeditions and economical. It is our present object to point out some of these.

When weeds are newly introduced, and when only a few scattered plants have made their appearance, they may be easily and thoroughly rooted out by the hand or hoe. But when they have multiplied from a few to millions—when the numbers become swollen like the little rill to the mighty river, such a retail attempt would be as futile as trying to dip out the waters of Niagara with a quart cup. In such instances, we are to look for some means of making a wholesale sweep of them. These means will vary with the nature of the weed against which the war is declared.

*Red-root*, often called pigeon weed from the supposition that migrating pigeons have dropped the seeds in their flight, has of late years nearly ruined innumerable wheat fields. When the numbers are few, they are very readily destroyed, by pulling them up early in the season. Some careful farmers, by a few day's annual labor, have succeeded in keeping their fields nearly clear of them. But they often increase two or three hundredfold annually; so that one plant will produce, say two hundred the second year, forty thousand the third, eight millions the fourth, sixteen hundred millions the fifth, and so on in this interesting ratio. The hard and stony seed will remain inert for years in the soil, and as each subsequent plowing brings it up to the surface, will produce successive crops.

After it has once obtained large possession of a field, it is folly to think of weeding by hand. The only remedy is to discontinue the culture of wheat, and resort for several years to autumnal and spring plowing, in connection with annual crops, and hoed ones, as frequently introduced in the rotation as practicable.

The *Canada Thistle*, unlike the red-root, increases mainly by the extension of its roots, and hence the great object in effecting its destruction, is to cut off all supplies through the leaves, and reduce it by it by famine. If the growth of the foliage can be completely prevented for a few months, every portion of the roots will necessarily perish and decay. On heavy and compact soils, clear of stones and stumps, the work of destruction may be effected in the most complete manner in a single season, by turning the thistles under about once a month by deep plowing. Any other way of smothering, such as cutting every plant twice a week just below the surface, covering with a thick coat of tan, sawdust, or with slabs, will accomplish the purpose; but plowing is the cheapest and most wholesale mode. On stony or gravelly soils, it will generally be found insufficient, and must be combined with constant hoeing or other efficacious remedies, previous to which seeding with grass, sowed very thickly, so as to form a strong turf, will be of great service. Mowing just at the period of blossoming, on the supposition that the plant at that time has nearly exhausted the root, has been repeatedly recommended, but unfortunately is but a partial remedy, as there are great numbers of roots and new plants, forming at all stages of growth up to this time, and which, had the plants been cut or smothered while yet small, could have made no progress.

We need not go into detail with the modes of destroying other weeds, because all of them may be included under the same two heads, represented by the red root and Canada thistle—one, increasing by seed, the other by extension of root. Those which prevail most in pastures and meadows, are commonly best exterminated by a rotation of such crops as do not favor their increase; and on the other hand, many others are checked or smothered by a heavy seeding with grass. With some, as chess, cockle, &c., especial care must be taken to sow clean seed. Chess is remarkably insidious in the numberless ways in which its seeds get possession of the soil, besides its rapid increase under favorable circumstances, which has in some instances been five thousand fold in a single season, making five thousand plants the second season, twenty-five million the third, over a hundred thousand million the fourth, and so on, provided every facility is given to its growth. Wild mustard, like red root, increases by seed, which if buried deep, will remain dormant a long period, ready to spring into life when the soil is turned up; but being an annual, instead of a biennial like red-root, annual sown crops are not favorable to its destruction, but it is best effected by hoed crops, or by frequent plowings and harrowings.

The scythe, the hoe, the plow, and the cultivator, if kept in motion, should be looked to as the great exterminators of weeds, but there are certain crops that often prove powerful auxiliaries. Dense grass is unfriendly to nearly all weeds; buckwheat often exerts a cleansing effect on perennial rooted creepers, by its smothering influence, besides the mellowing tendency of its deep roots; but we have never seen anything equal to corn sown in thick

drills, in reducing both annual and perennial weeds, as well as the tenacious grasses. Sown at the rate of three bushels per acre in furrows three feet asunder, and then covered with the harrow; dressed with the one-horse cultivator when a foot high, with no hoeing, it has left the land in autumn as clean as a newly plowed field, which without its effectual shade would have presented an unbroken crop of weeds and grass as thick as they could grow.

#### To Clean Chess out of Seed Wheat.

We commend the following to every wheat-grower who believes that wheat will turn to chess. The simple fact that the writer (and many others have done the same thing,) has eradicated chess from his farm, is sufficient to show the fallacy of the popular belief that "chess is only degenerated wheat." We have given great attention to this matter for more than twenty years, and we have never been able to find an instance of the conversion of wheat to chess; and the result of these investigations has convinced us that no such instance of transmutation ever did occur. We have often alluded to it, because we believe the point one of *great practical importance*; for so long as a man believes in the doctrine of transmutation, he will not take the pains necessary to extirpate chess from his grounds.

MESSRS. EDITORS—I have thought of sending you something like the following, for the last twenty years and over, but always put it off. To clean all the chess out, take the riddles out of the fanning mill, leaving the screen in—take off the rod that shakes the riddles and screen; pour the wheat slowly into the hopper with a basket or a half-bushel; turn the mill a little quicker than for ordinary cleaning, and every grain of chess will be blown out, unless where three chess seeds stick together, which is sometimes the case with the top seeds.

If every farmer will clean his seed wheat in this way, I will warrant that wheat will never turn to chess after the land is once clear of it; but the difficulty will be to get the farmer to try it. It is too simple to be believed. I have seen some men who stand high as agriculturists, whom I could not make believe it, until I went to their barns and showed them that it could be done, and that effectually. This fact itself is worth much to wheat farmers, if they will only try it. Two men will clean from 10 to 15 bushels per hour. If the wheat is light, say weighing from 50 to 55 lbs. per bushel, considerable wheat will blow away with the chess; but with such wheat as we raise here, weighing from 60 to 64 lbs. per bushel, little if any of the wheat will be blown out. In some cases it is better to raise the hind end of the fanning mill about two inches from the floor; more wind can be given, and not blow away the wheat. Every man that tries this will find it answers, and every reader of your paper should tell his neighbor that don't read.

I have not raised a wine-glassful of chess in more than twenty years. Before that I had lots of it, and was sure wheat turned chess.

A very extensive wheat raiser has agreed to come this fall, and make a part of one of my fields grow chess without sowing it, for which I have agreed to give him the remainder of my crop. He may destroy the wheat, but chess he cannot make it. JOHN JOHNSTON. Near Geneva, May 30, 1853.

**Scenery and Agriculture of Albany County.**

The annexed notes of a tour through this county, have been furnished by one of the committee appointed to visit the several towns, by the recently organised County Ag. Society:

A tour through all the towns in Albany county has disclosed two prominent facts, which were unknown before to us, and which are worthy of note.

The first is, that the scenery of the county is remarkably beautiful and picturesque, and of so varied a character, that one cannot weary of it. There are the rich meadows along the banks of the Normanskill, little isolated hills jutting up in solitary beauty, and then again forming themselves into a mountain range, stretching away for miles, in bold, mural declivities, and supporting a luxuriant growth of forest trees, and a mass of verdure unrivaled in any portion of our land. But the beauty of the Helderbergs, as you wind your way near their base, is nothing compared with the view from their summit. The Catskill mountains form a splendid back-ground to the landscape in one direction, while the undulating country between, spotted here and there with groves, farm houses, and cultivated fields, made, in the light of a clear May day, a most lovely picture. The country on the east bank of the Hudson, can be seen reaching away into the blue distance, and on every side there is something to attract attention and awaken admiration.

But it is not so much our purpose to speak of the scenery, as of the agricultural aspect of the county, and here we notice the second fact of which we spoke above, that Albany county affords some of the best farming lands in the state, and that a measure of care will develop its resources to a degree quite unprecedented in its agricultural history. For some eight or ten miles from Albany, in a southerly direction, the soil is of a light, sandy nature, and with underdraining might all be made productive. The low places where the water stands and ruins the crops, could by draining, be changed into warm, strong, soil. As you approach the mountains, the soil changes to a rich loam, formed by the decomposition of the limestone, sandstone, and shale, of which the mountains are composed, and which is admirably adapted to all the purposes of agriculture. The geological structure of the mountains, and the many curiosities which are to be seen at every step, we have not time or space to glance at. But we doubt whether a more fertile soil than that which lies in the valleys, and along the slopes of the hills, as you rise towards the Helderbergs, can be found in the state. The land up to the very summits of the hills is susceptible of cultivation, and there is less waste territory than in most counties. In some sections, ledges of rock crop out or lie very near the surface, which makes the soil rather shallow, but yet of sufficient depth to afford good pasturage. Some of the finest farms we have ever seen, whether situation and general appearance, or richness and variety of soil be considered, may be found in Bethlehem, New-Scotland and Coeymans, while Watervliet and Guilderland are in no respect inferior. The towns of Westerlo, Rensselaerville, Berne and Knox, furnish many excellent grazing and grass growing farms; and in most instances, the land which is called "too cold and sour" for tillage, might be made the best land by draining and cultivation.

In the first named towns we were informed that farms were valued at from \$60 to \$85 per acre, and in some instances could easily find purchasers at higher prices. In the last named, land is held considerably lower, owing to a greater distance from market, and local causes; but very many farms, for general purposes, are fully equal to any in the county.

The finest stone for building purposes and walls, abounds in the county, and can be procured at a slight expense. Upon some farms, stone walls were the only fences to be seen, and we could not but admire the solid, substantial appearance which they present. In many cases these flat stones might be used to great advantage for drains instead of tiles.

We were gratified to learn that quite a number of farmers are beginning to underdrain their land, and in all cases the results have been such as to induce them to continue the work as fast as other farm labor will permit. In some instances, the increase of crops in the first two years has more than paid the entire expense of laying the tile, while the soil is claimed to be doubled in intrinsic value. Mr. DAVID CALANAN, of New Scotland, the enterprising vice president of the Agricultural Society for that town, is improving his excellent farm by underdraining, and we also saw here the most approved agricultural implements, which, by the way, were not in very general use in most parts of the county. Other individual instances of spirit and success might be mentioned, but in a hasty tour we did not take notes sufficiently in detail to make such narration interesting.

The appearance of thrift which prevails in the county surprised us. We saw very few neglected farms, decrepid fences and dilapidated buildings. On the contrary, the farm houses are generally neat and commodious, and frequently tasteful, the barns and outbuildings are spacious, and give indubitable evidence that the farms produce the wherewithal to fill them. Wherever a new dwelling has been erected, it is invariably in a style superior to that which prevails in most sections of the country, and considerable taste is manifested in the disposal of trees and shrubbery around the best residences. Such improvements are pleasing indications of the competency, and also of a degree of refinement. There is something contagious about taste, and we expect to see a constant advance in this respect from year to year.

Though we were pleased to learn that a majority of the farmers in the county are becoming owners of their soil, and are money lenders instead of money borrowers, there are comparatively few farms which are cultivated with that care and skill which are necessary to the highest profit, and the greatest improvement of the soil. The lack of ambition and emulation among the farmers of the county, and the want of information on subjects of agricultural reform have been heretofore the hold-backs to progress. But evidences of increasing spirit and a true farmer's pride are not altogether lacking, and we trust that the Agricultural Society which has just been formed, will do much to awaken the attention and direct the energies of the farmers to higher modes of cultivation. We do not over-estimate the capabilities of the soil, in saying that Albany county can grow as large crops, and furnish as marked examples of superior culture as any county in the state, if the resolution to develop her resources be at once adopted and carried into effect. That such a de-

termination exists, the annals of the agriculture of the state of New-York will shortly show.

We have thus hastily sketched our impressions of Albany county, with the hope that they may correct the somewhat prevalent notion that it is inferior in soil to its sister counties, and also encourage the farmers to greater activity in making the agriculture of the county what it should be.

#### Couch Grass.

This weed, known also as the quack, quitch, and twitch grass, (*Triticum repens*), is well understood to be one of our worst weeds, on account of the extreme difficulty of its eradication, as usually treated. It often happens, when the ground is occupied with hoed crops, and the season is wet, that hoeing and cultivating instead of destroying, cuts and tears the roots into thousands of pieces, every one of which forms a new plant, and in this particular it is more troublesome even than the Canada Thistle. One of the best modes of eradication is to plow the ground during the dryest part of the season, and then rake out the roots with a spring-tooth horse rake; they are deposited in piles, and when decayed, form a good manure. A writer in a late number of the London *Mark Lane Express*, states that the couch grass draws largely on the fertility of the soil, and that therefore no good crop can ever be grown where it flourishes,—and for this same reason it constitutes, when decayed, an excellent manure; adding, “we do not know a better manure for turnips than decomposed couch, if saturated with a little tank liquor; and we have seen very fair turnips grown with decomposed couch alone. In the state first mentioned, we have tried it with success against town dung, and have no doubt, if it were collected and carefully put by, it would be a valuable auxiliary to the waste manures of the farm; but it would be the second year before it would be safe to apply a plant whose vital powers are so extensive and tenacious.” No analysis has been yet made of this plant, but the subject, we are informed, is about to be thoroughly investigated by Prof. Way.

In a former volume of the *Cultivator*, E. MARKS, of Onondaga county, describes a very successful experiment, by which several acres occupied with a “perfect mat” of this grass was completely destroyed in a season by successive plowing—that is, on the smothering system, known to be so effectual with the Canada Thistle. In the spring, he plowed with a shallow furrow, and a few days afterwards gave the ground a thorough harrowing. As soon as the plant began to appear above the surface, he plowed and harrowed again. The operation was repeated several times, each successive plowing being deeper than the preceding, until a depth of ten inches was attained. Not a vestige of the weed was afterwards seen. The whole field where this experiment was performed, contained 48 acres; it was sown to wheat and yielded an average rate of 32 bushels per acre; but the heaviest portion was that where the couch grass grew, and which had been subjected to seven successive plowings.

The more we satisfy the demands of conscience, the stronger they become. Love and religion are here like the sun. By mere daylight and torch-light, the air of the apartment is pure and undisturbed by a single particle; but let in a sunbeam, and how much dust and motes are hovering about.

#### Sheep Shearing Festival.

The statistical report of the Sheep Shearing of A. L. Bingham, of Cornwall, Vt., which is given in another page of this paper, though in itself very important, is not the whole, or the most generally attractive part of a farmer's festival. We are well aware that very many are ready to say that private enterprise and Yankee shrewdness lie at the bottom of all such gatherings, and we admit the fact; but after all, results farther reaching than individual profit, grow ultimately out of them. The public are reliably informed of the exact yield of wool from a flock of pure bred sheep, and thus have the means of knowing the real profit to be derived from them. The tendency of all accurate experiments is to promote care in the management of business, and to stimulate exertion. And no occupation is so much in need of an impulse in this direction as farming, and nothing will be so effectual in this respect as actual example. Private success always prepares the way for more extended trial, and the efforts of a single individual to promote his own interest, have very frequently resulted in the general adoption of measures calculated to benefit the entire public.

Another reason why these occasions are productive of good, is that farmers are brought together by them, and made to feel that they are a body of men having common interests and aims, common experience and trials, and also common pleasures and rewards. The lords of the soil are disposed to foster a kind of isolated spirit, and to feel that every man lives for himself, instead of claiming to be, as they might be, a body confederate, acting for the greatest good of the greatest number. It should be the maxim of every agriculturist to make farming the most profitable and honorable employment, and his farm the best one in the land. This spirit is fostered by the meeting of farmers from distant parts of the country, the exchange of views, and a comparison of success. This more remote effect is not to be lost sight of, and everything which tends to unite conflicting interests, to strengthen bonds of union and create new ones, should receive the countenance of our farmers. Those who attend such festivities from mere curiosity, often carry away an impression which will be lasting as time. We therefore fully agree with the sentiment that the Sheep Shearing Festival is founded in correct notions, and may be made useful in promoting the wool growing interests.

Hyde's Hotel, the place of holding this Festival, has no farther attraction in point of location, than that it is situated in one of the lovely valleys which abound in Vermont, where green pastures and still waters, in pleasing combination with cultivated fields, peaceful residences, and church spires, make up all the landscape. It affords the comforts of a quiet, secluded, country home, with the luxury of an excellent table, and the greater one of pure air. Mr. Hyde was born a hotel keeper, and without seeming to have any will of his own, has a peculiarly happy manner of pleasing every one in his own way.

The shearing took place in a building near the hotel, and the monotonous click of the shears was often relieved by a band of music in attendance, and also by the singing of the “Amphions”—a quartette company who have some celebrity as vocalists. The mechanical part of the shearing was completed about two o'clock in the afternoon

of Thursday, June 2, after which the audience assembled around the veranda of the hotel, upon which the speakers and the singers were seated. The veranda, and the rooms within hearing, were crowded with ladies, who received very unqualified compliments from the speakers. EDGAR A. ORMSBEE, Esq., of Rutland, Vermont, announced that a song had been written for the occasion by the celebrated Vermont poet, JOHN G. SAXE, which he would *deacon* to the audience, verse by verse, in the good old fashioned way, and then the Amphions, assisted by Prof. Wood and family of Albany, would sing it. The song was admirably adapted to the occasion, full of beautiful allusions and humor, and we regret that we have failed to receive the copy of it which was promised us, and which would add as much to this description, as it did to the exercises. In the absence of it we are compelled to trust entirely to recollection, and cannot do justice to the speakers.

After the singing of the first verse, MR. SAMUEL GREENEY of Boston, Mass., an elderly gentleman who has retained the freshness and vivacity of youth in the maturity of age, made some happy remarks, in which he alluded to the beautiful scenery of Vermont, the intelligence and prosperity of her inhabitants, the opulence of her native resources, and the importance of developing them. The value of mental and moral culture was made the subject of remark to the young. Everything Mr. Greeley said was listened to with marked attention, and he sat down amid hearty cheers.

JUDGE KEENE of Keeseville, N. Y., next spoke of the early history of the state, and of the rapid progress which has been made in agriculture, in the facilities for transacting business, and for acquiring education, and ended with an appropriate sentiment.

A verse of the song which paid a fitting tribute to the beauty and excellence of the "Green Mountain Girls," was replied to by MR. PIXLEY of the Amphions, in a manner which showed that he was well versed in the beauties of female character, while his humorous language freed him from the charge of being excessively sentimental.

SOLON BURROUGHS, Esq., of Vergennes, Vt., responded to the choice compliment given to the Morgan and Black Hawk horses. Every state has a right to be vain of something, and Vermont was so of her horses. They were known in every part of the Union, and every Vermont boy and girl, youth and maiden, man and woman, knew all about their merits. The speaker introduced some capital strokes of wit in his allusion to the enthusiasm which prevails in the state with regard to the "fast horses."

T. C. PETERS, Editor of the *Wool Grower*, made an amusing speech, in which praise and caricature were mingled. He acknowledged the excellence of Vermont horses and sheep; but he stigmatized certain individuals who hailed from the State as "sharers." He said people out west were afraid to trust them, and advised the leaving off the use of "Cornwall finish" and the practice of honesty. Mr. Peters spoke in so good natured a spirit, that no one could take offence, and closed by giving farmers and their sons and daughters very sound advice.

"The Golden Fleece," was the theme of one of Mr. Saxe's verses, the mythology of which was aptly explained by EDGAR A. ORMSBEE, Esq., who made a practical and impressive application of the idea it symbolises. Jason was obliged to turn his

attention to breaking cattle and plowing the land, before he could recover the lost treasure and win himself renown.

The two other verses of the song, were replied to by a member of the Amphions, and by Prof. Wood of Albany, but for want of the song itself, we are unable to report their remarks. The song was well sung, and received with hearty cheers by the audience. Immediately after, the following toasts were read by Solon Burroughs, Esq.

*Vermont*—The first daughter of the old thirteen; she will never disgrace the family.

*Old Addison*—Noted for her improvement of stock, may her wealth keep pace with her enterprise.

*Rutland County*—May her agriculture advance with her increasing advantages.

*Rutland and Addison*—Divided in name only, they are united in interest. May they become as famous for farms as they are distinguished for natural beauty.

*The Improvers of Stock*—Like inventors of machinery, at first hooted at, they are always applauded afterwards.

*The Sheep Shearing Festival*—Founded in correct notions, may it become an established holiday.

*A. L. Bingham*—Though absorbed in wool, anything but *wooley*. He cannot be counterfeited by "Cornwall Finish."

*John A. Taintor, Solomon W. Jewett and George Campbell, Importers of French Merinos*—Posterity will award them the title of benefactors of their race.

*"Our Native Hills"*—Every where to be honored, but first and foremost the "Hill" of Black Hawks.

*"Our Host"*—Like old wine, age improves his flavor and mellows his temper. His guests never want "Heidsick." (Hyde-sick.)

*The Albany Cultivator and The Country Gentleman*—The first, with its points worn brighter by age, stirs deeply the soil and the mind—the second, its able coadjutor, is ever welcome at our farms and firesides.

This last sentiment was briefly responded to by JOSEPH WARREN, who thought the entire Agricultural Press should have received the compliment. Agricultural Journals have kept pace with the improvements of the day, and are becoming more and more important to the farmer. The stability of farming interests demands a like character in the publications which advocate and influence them.

MR. BINGHAM then announced that the farmers interested in the rearing of sheep, would, at the State Fair, organize a "Vermont Sheep Shearing Club," for the purpose of accurately testing the relative merits of all the different breeds; and the audience, who had given patient attention for more than two hours, dispersed to see the display of horses, and to their homes, all seeming well satisfied with this pioneer farmer's festival.

#### Cost of Ruta Bagas.

Farmers too often become disheartened at the cost of raising roots, by counting the cost of the crop *per acre*, and not the cost *per bushel*. When the land has been previously well cleared of weeds by proper tillage, and rendered highly fertile by manuring, there is no crop that can be so cheaply raised as the ruta baga. Judge Buel estimated the average cost at five cents per bushel; and in no case of good management, and especially with a timely destruction of the weeds, need it exceed this amount. We observe a corroborating experiment detailed in the last number of the *Genesee Farmer*, by a Connecticut correspondent. The land—one-fourth of an acre—was an old meadow, broken up for potatoes the preceding year. It was

well manured, and plowed deeply; manured again in a few weeks, and plowed one-half as deep as before. It was again plowed twice, and repeatedly harrowed. Our readers will recollect we have often and strongly urged the importance of thorough pulverization and mixing the ingredients of the soil, and the large crop here obtained proves its value. After these harrowings, furrows were drawn two feet apart, and four loads, (equal to 16 per acre,) of rich compost drilled into them. The soil was replaced with a plow. Over these furrows the seed was planted. The plants were properly thinned, well hoed, and harvested in autumn. The product was over 300 bushels, or more than 1,200 per acre; and after counting all expenses, including removal of stones, four plowings, four harrowings, cost of manure, planting by hand, hoeing, harvesting, and rent of land, the cost per bushel was but *five cents*.

#### Caterpillars in August.

In the Cultivator, a year or two since, was an account of the ravages of a caterpillar or worm among the trees of Cayuga county, in the months of August and September, by David Thomas. We have noticed the regular periodical appearance of what we presume to be the same species during several years past. They are of a dirty ash color, and, when full grown, about an inch long. Like the common orchard caterpillar of spring they weave a web on the limb of a tree, from which they sally forth and devour its leaves. They seem to prefer the black ash, (*Fraxinus sambucifolia*) to all other trees, next hickory, black walnut, and all the fruit trees in common cultivation, seem to be highly relished. They generally eat the *parenchyma* and leave the veins of the leaf, especially of apple and cherry trees.

In the years 1850 and '51, they were very abundant in certain localities in Western New-York. At the head of Honeoye lake, in Ontario county, is a swamp of more than an hundred acres, covered with trees which are mostly black ash. These trees were stripped of their leaves during the month of August of those years; ash trees first, and then the remaining, until all were naked. On visiting this swamp during the height of their ravages, a confused crackling noise was heard among the branches, caused by the falling caterpillars and the millions of their moving jaws among the leaves.

In 1850, a similar swamp near Ezekiel Birds-eye's, in Hopewell, Ontario county, shared the same fate. After the leaves of this swamp were destroyed, they went into an adjoining cornfield and eat the leaves of more than two acres of corn, reducing the crop at least one half. Had not the ears of corn been partly formed when they entered the field, the damage would have been much greater, or rather the entire crop would have been destroyed. As it was, the ears were shivelled and fodder gone. On the same farm they crawled to a hickory tree, situated in a field about forty rods from any other tree, which they divested of its leaves.

The last season they were less abundant than in the two preceding years, and it is to be hoped that they will not at least increase. Your truly, S. B. BUCKLEY. *West Dresden, N. Y.*

The idea of producing good crops without manure or tillage, is equalled by the man who expects to draw milk from the cow that has not first been fed, or to raise superior calves without care and good feeding.

#### Patent Bee Hives.

Will some of the correspondents of the Country Gentleman inform us, which, among the many patent bee-hives, is the best adapted for producing honey. T. B. Vermont.

We have made some observations, and conversed with different bee-raisers, all of whom, with scarcely an exception, had come to the same conclusion, substantially, as those contained in the following statement of LEWIS F. ALLEN, copied from a former volume of the Transactions of the New-York State Ag. Society:

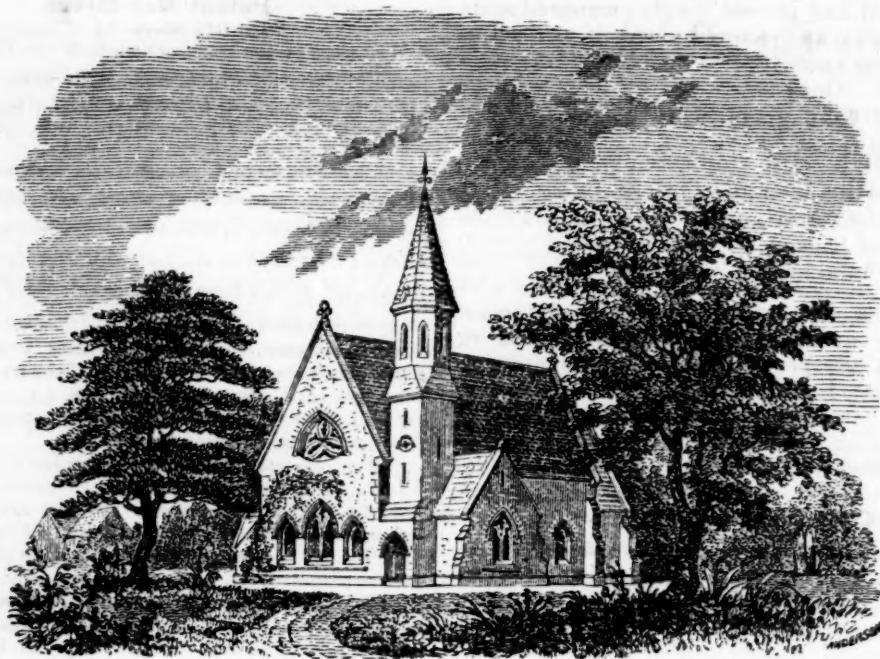
"I have seen, examined, and used several different plans of *Patent Hives*, of which there are probably 30 invented, and used, more or less. I have found *all* which I have seen unsatisfactory, not carrying out in full the benefits claimed for them.

"The bee works and lives, I believe, solely by *instinct*. I do not consider it an inventive, or *very* ingenious insect. To succeed well, its accommodations should be of the *simplest* and *securest* form. Therefore, instead of adopting the complicated plans of many of the patent hives, I have made and used a simple box, containing a cube of one foot square *inside*—made of one and a quarter inch sound pine plank, well jointed and planed on all sides, and closely put together *perfectly tight* at the joints with white lead ground in oil, and the inside of the hive at the bottom chamfered off to three-eights of an inch thick, with a door for the bees in front of 4 inches long by three-eights of an inch high. I do this that there may be a *thin* surface to come in contact with the shelf on which they rest, thus preventing a harbor for the bee moth. (I have never seen a patent hive which would exclude the bee moth, nor any one so well as this, having never been troubled with that scourge since I used this tight hive.) On the top of the hive, an inch or two from the front, is made a passage for the bees of an inch wide and six to eight inches long, to admit the bees into an upper hive for surplus honey, (which passage is covered when no vessel for that purpose is on the top.) For obtaining the honey I use a common 10 or 12 quart water pail, inverted, with the bail turned over, in which the bees deposit their surplus. The pail will hold 25 to 30 pounds of honey. This is simple, cheap, and expeditious; the pail costing only 20 to 25 cents, is taken off in a moment, the bail re-placed, and the honey ready for transportation, or market, and *always in place*. If there is time for more honey to be made, (my bees made 2 pails full in succession this year:) another pail can be put on at once.

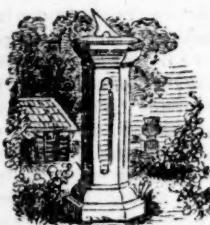
"Such, gentlemen, in short, is my method, I have kept bees about 20 years. I succeed better in this plan than with any other, it being cheap, simple, convenient and expeditious."

#### Manure for Roses.

Thomas Rivers, in his last Rose catalogue, says that for a neat surface dressing for Autumnal Roses, to be applied late in spring, wood ashes and guano have proved most excellent fertilizers, in the proportion of half a peck of guano to a bushel of ashes, applying two quarts of the mixture to each tree, in a circle eighteen inches in diameter round the stem, and suffering it to remain undisturbed upon the surface. The ashes retain the moisture from the dew and showers, and the effect, in giving a vigorous growth, with an abundant crop of the flowers in the autumn, has been very apparent. In our dryer climate, an occasional copious watering or a thin grass mulching, placed over this compound, would doubtless be of decided benefit, and during dry periods would in fact be indispensable.



#### Our Country Churches.



**N**a village, the first object that attracts attention is the church, and from it the general impression of the place is formed. There is, to a good degree, a just pride felt in the village church. It is, by common consent, allowed to be the expression of ideas of taste, and the type of an affection which should be the deepest and holiest in our natures. It is a public recognition of the great truth, "there is a God," a public promise to worship Him and keep his commandments, a public testimonial of love for the Great Supreme, and a public invitation to the world to unite in worship and praise. The law of taste requires that the outward form of the church should, so far as practicable, embody these ideas. That there is a language in the contour of a building, is as true as that there is expression in the form and features of the human face; and an artist's power can speak the meaning into blocks of stone, and make them convey the thoughts of the reverential mind, and the feelings of the devotional heart. The pleasant countenance of one person assures the stranger of a kind heart and a sympathetic nature; while the cold and forbidding look of another, sends a chill through the veins. We often say that virtue and benevolence are written in the features of one man, and that vice and avarice lurk in the wrinkles of another's face. The same habit of observation directed to the expression of buildings, would enable one to distinguish at once their characteristics, and to judge correctly of their appropriateness.

But no very great practice is necessary to perceive that the churches in the country do not impress the mind with the ideas we have mentioned. There is too frequently no element of beauty in them. Hastily constructed in no style of architecture, as cheaply finished as conscience would allow, with no tasteful surroundings, they stand in open space, seemingly deserted, while their frail, tottering spires point mournfully to the sky. We are persuaded that ignorance of any better mode of building, rather than intentional neglect, lies at the bottom of this deplorable condition of our country churches. They have been imitated to a great extent from the rude models which our early church edifices furnished, and rural taste has never come in to suggest her always beautiful decorations, nor has American architecture supplied us with designs true to the idea of a House of Worship. We ask for nothing classic, nothing elaborate, nothing lavishly expensive, but we wish to see edifices appropriate, simple and beautiful. Some deviation from right lines and clumsy steeples, some adaptation to the location, and above all, some trees and shrubbery to give a rural effect are particularly desirable. Why not have a lawn well kept, surround the church, the shade of our forest trees overhang it, and vines and ivy embower it? Every hour spent in decorating the grounds about the church will deepen the affection for it, while if its forbidding appearance be once changed into one winning and pleasant, the lessons which fall from its pulpit would touch many hearts now insensible to the beauties and truths of goodness and piety.

We present a cut which may suggest some idea of the harmonious and truthful expression which may be given to a country church, but even this would look bare without the trees. It is to be regretted that we have not more designs of the right order. A promising field lies open to the architect in this direction.

## The Dairy.

### Management of Cream.

G. H. T. inquires how to manage cream, so that the greatest quantity of butter can be obtained.

From my short experience, I draw my conclusions. The cream should be taken from the milk immediately after the milk changes or sours, and before the milk thickens or curdles. If it is taken off while the milk is sweet, the cream should stand until it sours a little, before it is churned; and while standing it should be brought to the required temperature.

The process of churning should be very steady, and should require about one hour of time, to produce the greatest quantity of butter.

I do not think there could be much gain in cooling the milk before taking it to the milk room. Our custom is in warm weather, to open the door early in the morning and late in the evening, so that the warm air may pass out, and the cool air in. The room should be kept closed during the day. I think a damp room or cellar is actually detrimental to the raising of cream; because the quantity of cream is less, and lighter colored, softer and thinner, so much so that it easily runs through the skimmer while skimming.

The cause of cream becoming hard and sealy, is in consequence of the wind blowing upon it, or a current of air passing through the room. H. T. RICHMOND. *Butternutts, Otsego Co., N. Y.*

### Turneps and Milk.

Having seen in the April No. of the Cultivator, a recipe headed "Turneps and Milk," for removing from milk the unpleasant flavor produced by feeding turneps to milch cows, I thought I would give through the columns of your paper to those interested in this matter, my experience on this subject. Our dairy consists of 15 cows, mostly native, varying in the quantity of milk each one yields, from 32 quarts to 12 quarts per diem. During the past winter they have been kept mostly in the stables, turned out but once during the warmest part of the day, for fresh air and water. Their diet has consisted of good sweet meadow and clover hay, and turneps, nearly one bushel per diem to each cow. Now I am coming to the point. To prevent the turneps from imparting their unpleasant flavor to the milk, the cows were fed with them morning and evening, immediately after each milking, for this reason—that between the hour of feeding, and the following milking, sufficient time elapsed for the turneps to be digested, and to have passed by means of the blood through the system, and carried off from the body by perspiration and their droppings. In this manner our dairy has been kept, and notwithstanding the milk has passed a number of as delicate palates as you can find in the country, I never heard of a trace of turneps being discovered.

Another simple method of removing the flavor of turneps, where farmers have the necessary means and conveniences, is to put the turneps into a large box, with chopped hay, straw, or corn fodder, together with the meal or bran, and steam the whole together until they are soft, and until the mixture is perfectly saturated with water. By this process, all the strong unpleasant flavor is removed, and a palatable one imparted.

Besides this, I have found by experimenting in feeding milch cows warm and cold food through the winter, at least 40 per cent difference in favor of the warm steamed food. W. F. SANDS. *Romulus, Seneca Co., N. Y., May 6, 1853.*

### Manufacture of Cheese.

We find in the Journal of the Royal Ag. Society of England, "a detailed account of the making of Cheshire Cheese, by HENRY WHITE," for which a prize of \$250 was awarded by the society, which we propose to transfer to our pages, believing that we cannot do our cheese-makers a better service, long as it is, than to copy it entire.

It has sometimes been a matter of dispute among Englishmen, which particular county or district is the most famous for the making of cheese. I think, if quantity is to be taken into account as well as quality, the decision must be in favor of Cheshire, as there cannot be less, upon a moderate calculation, than 12,000 tons made in that county annually; a considerable portion of which is of excellent quality.

It is scarcely necessary to premise that milk, from which cheese is made, consists of three distinct parts—*cream, curd, and whey*—into which, by repose, it spontaneously separates; but the process of separating the whey from the other bodies, may, as in cheese-making, be accelerated by infusing a small quantity of a simple acid extracted from cured and dried maw-skins, which have been previously dissolved in warm water. This infusion is commonly called "steep," but more properly *rennet*.

The art of cheese-making consists in the complete extraction of the whey and in the proper compacting and curing of the curd. The richness of the cheese depends upon the quality of the milk, or, in other words, on the proportion of cream which the milk contains. The cheese of Cheshire is professedly made from new milk, or milk from which no cream has been taken. It is, however, well known, that in many dairies, in the morning before cheese-making, a small quantity of cream is skimmed off the previous evening's milk; this cream is either churned by itself, or mixed with whey-cream, by which there is obtained a better quality and greater quantity of (so called) whey-butter. It may appear singular to some, that any portion of cream should be found in whey, but such is the fact, and the means used in Cheshire for extracting it are very simple.

Before entering into a detailed description of the mode employed in Cheshire in the making of cheese, I would remark that this Essay is founded upon my own observations, made during a fifteen years' residence in, and intimate connection with, that county; which latter is still existing. I have long felt an interest in the subject of cheese-making, with a desire to see it conducted upon more scientific principles, from a conviction that, were such the case, both the pocket of the producer and the stomach of the consumer would often be more agreeably filled; but I do not wish it to be supposed from this remark, that I profess myself conversant with these principles; my information being more of a practical nature, and as such I offer it to the Society.

*Number of Cows kept, and Produce.*—The number of cows kept for the purpose of a cheese dairy is seldom less than 8 or 10, or more than 70 or 80; and is of course regulated by the size of the farms—these average about 90 or 100 statute acres, upon each of which about 15 or 18 cows are kept. From 18 cows, a cheese of from 36 lbs. to 54 lbs. weight is made daily during four or five months of the summer. The annual produce of cheese per cow depends both upon the quality of the animal (with the mode of keeping her) and of the *land*, or rather the *herbage*. I have known many farmers sustain great loss by not feeding their cattle sufficiently well in winter. With judicious management, about 3 cwt. of cheese (or 336 lbs.) may be considered as the average amount made per annum upon land let for 30s. a statute acre; but in a few instances 5 cwt. (560 lbs.) per cow, and even more, is sometimes made. This can only be from a small and choice stock.

*The Season.*—It is the practice amongst farmers in this county, to arrange so as to have most of their cows

calving in the months of March and April; and so soon as the calves are fed or disposed of, the cheese-making commences, and continues to nearly the end of the year. In January and February the quantity of milk obtained is often so small that the farmer prefers selling it in the neighboring towns or making it into butter. There are however instances, in large dairies (of 70 or 80 cows), of cheese being made throughout the year.

*Milking.*—The operation commences about five o'clock in the morning, and five or six in the evening. In this county it is the practice for most of the servants, both men and maids, to assist, and for the cows to be milked in the cow-houses (called here "shippens") all the year round. When, as is usual, there is one milker for every six or seven cows, the milking seldom exceeds an hour and a quarter.

The milk of new-calved cows is not mixed with the other until about four or five days after calving.

*Offices and Utensils.*—As the evening's milk is seldom made into cheese until the following morning, and sometimes in small dairies (where four "meals" are used) not until the second morning, a cool "milk-house" is necessary; on which account it usually occupies that side of the farm-house least exposed to the sun. The utensils in which the milk is kept are usually portable shallow earthenware vessels called "pan-mugs," and in some dairies leaden or zinc coolers. Most of the milk-rooms have lattice or wire windows for the circulation of air, and the floors are laid in a sloping form for the free escape of the cold water with which they are daily swilled throughout the summer months. If precautions of this nature be not attended to, there is a risk of the evening's milk becoming sour; in which case, whatever quantity of new milk be added to it in the morning, the cheese will be sour also. I am led to believe that a temperature of as near 50° Fahrenheit as could be maintained, would be best for a milk-house throughout the year. The *dairy* is generally situated near the milk-house, and fitted up with two *set-pans* or *boilers*—a large one for scalding the whey, and a smaller one for heating water. The "cheese-presses" and "screw" are kept within this room, and the operation of cheese-making is here carried on. Some farm-houses are not provided with a *dairy*, and the cheese is then made in the *kitchen*—this is commonly the case on small farms. The "salting and drying house" (often one and the same room), if conveniently situated, adjoins the *dairy*. The cheese is placed here on stone or wooden benches, salted *externally*, and is afterwards left so as to dry gradually before being removed to the cheese-room. By some dairy-maids, this external salting is dispensed with, and the room is then of course only used for *drying*. These offices are all on the ground-floor. In some cases the cheese room is over the *dairy*, in others over the *kitchen*, or some other room wherein a fire is usually kept, and sometimes, though rarely, over the *cows-houses* or *stables*. Light and air are invariably excluded, either by a curtain or shutters. The floor is either of plaster (gypsum) or boards, but more commonly the latter; some of the larger cheese-rooms are warmed by stoves, or hot air, and occasionally, though rarely, by fire places in the room itself. The small cheese-rooms are seldom supplied with artificial heat, except what is gained from the rooms below. Some cheese-rooms are occasionally found to be in the summer time too warm, in which case the cheese has to be removed for a time to a cooler part of the house. This is more generally necessary where the building is slated, and exposed to the noon-day sun; but is seldom or never experienced where the roof is of thatch. The size of these offices is of course regulated by the extent of the farm; where 30 cows are kept I find them nearly as follows:—

	Yds.	Yds.	Square Yds.
Milk-house, .....	6 by 3	or about	18
Dairy, .....	6 by 5	"	30
Salting and drying-house, .....	4 by 5	"	20
Cheese-room over dairy and drying-house, .....	10 by 5 (or 8 by 6)		50

The utensils, excepting those I have described, will be noticed hereafter.

*Process of Cheese-making.*—As the first process—namely, that of extracting the whey and salting—occupies, according to circumstances, from five to seven hours, it is found most convenient to commence it in the morning. This being the ease, the evening's milk has to be kept all night in the milk-house. In the morning, the cream having been skimmed off, a portion of the milk is warmed. This is done in a circular fat-bottomed brass or tin pan, floated in the boiler, the water of which has been previously heated for that purpose; the size of this pan is about 20 inches in diameter and 8 inches deep. The quantity to be warmed depends upon the state of the weather; for the first two or three months of the season (say March, April and May) it is not unusual to heat as much as half the evening's milk to a temperature of 100° Fahrenheit, and this heat is rarely exceeded, excepting by those dairy-maids who wish to save themselves trouble in the after process. The "cheese-tub," which is similar to a brewing-tub, having been placed in readiness in the dairy, the cold milk is now put in and the warm added. Supposing the temperature of the cold milk to be about 50°, and the warm 100°, and they were in equal proportions, the heat after mixing would be 75°, or something less; but in warm weather it will be sufficient if it reaches 70°. I have known instances of good cheese being made in summer without warming any portion of the evening's milk; indeed such now is becoming the general practice. In very warm weather some dairy-maids think it necessary to reduce even the temperature of the morning's milk. The *cream*, which is diluted either in about double its quantity of warm or new milk, or by being exposed to the heat of the boiler in the same way as the milk, is next put in. I have before stated that it is customary to retain a small part of the cream for butter; when this is the case, it is considered best to skim it off the whole surface of the cream before diluting, as by that means the froth and bubbles, which are supposed to be prejudicial to the cheese, will, for the most part, be taken off. This leads me to the conclusion, that *fixed air*, if it gets mixed in the curd, has been found to be detrimental. Since warming of fluids has a tendency to dispel this fixed air, it is perhaps worthy of consideration whether it would not be better to warm the *whole* of the evening's milk to the required temperature, rather than heating a *part* of it so high as 100°. The process adopted with the evening's milk, as above described, is generally finished previous to the time of milking in the morning; but if not, the dairy-maid stops and completes it before the *new* milk is brought in from the cows. This new or morning's milk is then added by passing it through a *sieve* placed upon the "cheese-ladder" over the cheese-tub. When the whole is thus collected, some few bubbles are invariably found floating on the surface; these are skimmed off and passed through the sieve to break them.

One of the most important points now to be attended to is the heat of the milk preparatory to coagulation, as the milk, if at a proper temperature, should now be ready to "set together," that is, to receive the rennet. This heat is rarely tested by any other thermometer than that of the dairy-maid's hand; some may, and I have no doubt do, determine it pretty correctly, but cannot always.

In consequence of the changes in the weather it is difficult even for an experienced dairy-maid to know at all times, what proportion of the evening's milk should be warmed; she is therefore cautious not to warm too much, until the morning's milk is added and the consequent heat ascertained. If it be deemed too cool, a little of the evening's milk which has been reserved is then warmed, so as to produce the heat required; but when none has been reserved, the necessary quantity taken from the tub after the admixture of the two milkings is warmed for that purpose. Little is known amongst the farmers or dairy-maids as to the *precise heat* which is best. I have seldom heard the subject named, except by a vague comparison, that such and such dairies were made *colder* or *warmer* than others. I am acquainted with some farmers who

wives are said to have a peculiar method of their own, and who, I believe, obtain a high price for their cheese in the Manchester market; chiefly from the tendency of the cheese to green mould. I know little of the system which these parties adopt, but I understand they make their cheese "cold"—that is, set the milk together at a low temperature; and I am also inclined to think they use less salt than others. I have not solicited the *privilege* of prying into the *mysteries* pursued in these dairies, nor could I expect to have been so indulged, if I had, especially if they supposed it was for publication. It is said these parties get a greater price for their cheese than many of their neighbors, which I have no reason to doubt; and I think, from what I have seen, they make quite as great a quantity per cow. But the *real* price obtained, and the *precise* quantity made in any particular dairy, is seldom known beyond the farmer's own family and the factor.

I ought, perhaps, to state that I have tasted some of these cheeses, and find them generally very good, fair toasters, and without coloring; but in some I have detected a slight sourness; from this cause, or, what is more probable, from too little salt being used, the cheese will not keep long before decomposition takes place. To the farmer this would only be of consequence in the event of his not being able to sell the article at the time he wished. In the dairies where I have been permitted to take observations, the lowest heat of setting the milk together was 77°. I am disposed to think those who make a so-called *cold-cheese* do not adopt much lower temperatures, even in summer, than 74° or 75°; since a much longer time would be occupied in gathering and compacting the curd, and considerable risk incurred of having what is termed a *sour cheese*.

The evening's milk in the tub being at or about 75°, as before stated, and the milk which is brought from the cows 90° or 95°, the temperature of the whole is then found to be somewhere between 80° and 85°; and I am of opinion that the heat at which milk ought to be and is commonly coagulated ranges between those two temperatures.\*

When *coloring* is used, which is not so extensively the case as formerly, it is put into the milk immediately before the rennet. The nature of the article used for this purpose, I propose to investigate under a distinct head in the Appendix. The *quantity* of coloring is in some degree regulated by the quality of the milk; if a considerable portion of the cream of the evening's milk has been taken out for making butter, a greater quantity of this coloring matter will be required to give the cheese that appearance which is found necessary to please the *eye* of the consumer, and particularly of those residing in London or at a distance. *Annatto* (or rather a coloring matter which goes by that name) is the article used; 1 lb. of it for each ton of cheese is a moderate calculation; this would be after the rate of half an ounce to 75 lbs. The present retail price of the "best *real* Spanish *annatto*" is 4s. per lb. The coloring is prepared and applied in different ways, but the most common is to take a piece of the requisite size, to fold it in a small bit of linen, and put it in half or a quarter of a pint of warm water the previous night. By this means it gets sufficiently dissolved. When the infusion is poured into the milk, the linen bag containing it is dipped in, and rubbed betwixt the fingers until the coloring is all discharged. The dregs, if any, remain in the bag.

The *rennet*, or *steep* as it is commonly called, is next added. I have already stated in the introduction, that this is an infusion made from the preserved stomach or maw of sucking calves, thence called *maw-skins* or *bag-skins*. A recipe for preserving the skins will be found

\* Since writing the above, I have met with a farmer in Eddisbury Hundred, who says he used the thermometer during the year 1841, for the first time, and that the heat he uniformly adopted was 84°. I also found a thermometer at another dairy near this, but it was not in use. I was allowed to test the heat of the milk with it, and found it 78°; this was in June. The precise heat at which milk ought to be coagulated is a matter of vital importance in cheese making, and can only be ascertained by a series of careful and judicious experiments made by scientific and practical parties.

in the Appendix. To define the quantity of rennet sufficient for coagulating a given quantity of milk is a very difficult matter, as the maw-skins vary so much in quality. When the farmer is laying in a stock for the year, he generally calculates upon a dozen of skins to a ton of cheese. In using them, it is the practice often to cut two skins at once. Three square inches taken from the *bottom* (or strongest part) of one, and one or two inches from the top (or weakest part) of the other, is generally found sufficient for sixty gallons of milk. These two pieces of skin are put into a cup containing about half a pint of luke-warm water, with the addition of a tea-spoonful of salt, some part of the day previous to being used. The water thus impregnated with the maw-skin is passed through the sieve in to the milk, but the skin itself is generally, though not always, kept out. The rennet cup is well *scalded* before being used again. I have been told that some farmers make a sufficiently large quantity of rennet to last several weeks, and find it to answer better than making a small quantity daily. The question is, will it keep *sweet*?

The coloring and rennet having been put in, the milk is well stirred and left to coagulate. It is usual to invert the skimming dish on the surface of the milk—a practice of doubtful propriety, for this reason, that the curd immediately under it does not attain the same adhesiveness as the other, and is one of the causes of what is commonly called *slip curd*. The tub is now covered up, either with a wooden lid, or with cloths supported by the "cheese ladder;" these assist in preserving the heat of the milk, and protect it from dust and dirt.

The coagulation (or "coming") is generally effected in an hour or an hour and a half. As far as my own observations extend, I am led to think that an average of these two is sufficiently long, if the proper means are used in effecting the formation of the curd; for it is well known that, *ceteris paribus*, the warmer the milk is at the time of setting together, or the stronger the rennet, the sooner will the coagulation take place, but the curd will in consequence be tougher, and less in quantity; on the contrary, the cooler the milk, or the weaker the rennet, the longer will the curd be in forming, and the more tender its quality, but its quantity will be greater. By attention to these results the cheese-maker may soon decide when too much or too little rennet has been put in the milk, and correct the quantity the next time. It may be proper here to state that too much rennet has a tendency to impart an unpleasant flavor, or bitterness, to the cheese.

It may generally be expected that the heat of the curd when formed will be four or five degrees less than the milk was when set together; and it is desirable, particularly in cool weather, that this difference should not be greater, otherwise the subsequent labor will be more difficult. To determine exactly when the *curd* is in a fit state for what is called "breaking," requires some practical knowledge; with attention this is soon acquired. The point is generally determined by gently pressing the surface of the milk with the back of the hand, or by lifting up the skimming dish, beneath which the curd and whey will distinctly appear if the coagulation is complete. Another criterion is the color of the whey, which should be of a pale green.

[To be continued.]

**PROFITABLE COW.**—I give below the product of my cow for six months and a half, commencing the first day of April, 1852. The account was most accurately kept.

The amount of butter made, 301 lbs., at 17c.	\$51 17
Milk used by family, .....	7 00
Calf, .....	2 00

\$60 17

Cost of keeping in pasture, .....	5 00
-----------------------------------	------

\$55 17

The cow is five years old, a cross of the native and Durham. She has the appearance of doing better this year than last. C. C. R. Oswego, May 9, 1853.

## Horticultural Department.

### Mulching.

This process, although known and practiced for many years by a few cultivators, has become extensively adopted only at a very late period. It seems peculiarly adapted to our hot and dry summers, and operates chiefly in preserving the moisture of the surface, and in preventing the growth of weeds. The moisture at the surface of the earth from rains and dews is quickly dissipated under a hot sun; and if this surface is allowed to become covered with a dense growth of living grass and weeds, these pump out of the soil and throw off into the air a much larger quantity of moisture than is evaporated by a bare surface of earth only. But if this surface is covered with a few inches of old straw, hay or leaves, the moisture is retained in the soil, and the growth of weeds prevented. As a general rule, we have found it most advantageous to leave the surface bare and keep the soil well mellowed till near mid-summer, and then to apply the mulching. For a covering of litter, while it promotes the humidity, also prevents the heating of the soil, and in this way may retard early growth if applied too soon. There are exceptions, however; one in the case of large, deeply-rooted trees not affected by nor needing mulching, and the other where small plants, which are removed in summer, need the careful and constant retention of the moisture of the earth. We have succeeded, with scarcely one failure in fifty, in transplanting the strawberry in the drought and heat of summer, by simply giving the surface a mulching of two inches of barn manure, and on which the watering was poured when necessary. Indeed, there is nothing that better prevents the ill effects of baking by surface watering, than a covering of this sort of a moderate depth. Mulching will, however, promote moisture in the soil, even when neither artificial nor natural watering is given, simply by arresting such as rises upwards through the earth. In one instance a striking illustration of this effect was furnished during a very long season of drought, which injured and threatened to destroy a row of newly transplanted apple trees. Their leaves had already begun to turn yellow, and growth had ceased, but on coating the ground about them with a crop of mown weeds, a change was soon effected, and in three weeks the leaves had returned to their deep green hue, and in some instances growth had recommenced. But on no kind of tree is mulching more necessary than on newly transplanted cherry trees. Thousands of these are lost every season, after they have commenced growing, by the drying heat of mid-summer, and the evil is sometimes increased by superficial watering. A deep mulching will generally prove a complete remedy if seasonably applied.

Some interesting facts on this subject were stated, and valuable suggestions made at one of the conversational meetings of the Massachusetts Horticultural Society. S. WALKER remarked that he had used tan, sawdust, litter, leaves, &c., but he believed short, newly mown grass one of the best things—he had mulched a great deal with it, and found it laid close to the soil. He

also recommended the succulent weeds of the garden or roadside. He found tan and sawdust to be useful merely by retaining the moisture. D. HAGGERSTON had found sedge from salt marshes best, particularly if cut short; a good watering upon it made it lay close to the ground. He found it excellent for strawberries. He had also found tree leaves excellent, if they had partly decayed, so as not likely to be blown away. Old hot-bed materials made of leaves and manure had proved particularly fine. Several spoke of the ill effects of too deep a mulching, but we think the more common error is in spreading the covering of the soil too thinly.

Mulching is a very easy and cheap practice, and the season is now at hand when our readers may prove by varying experiments the best mode of performance.

### Thinning out Vegetables.

It was Cobbett, we think, that remarked, when speaking of the ill effects of thick planting, that one cucumber plant in a hill would bear more fruit than two, two more than four and so on, and if there were fifty plants in a hill, the whole of them put together would bear no cucumbers at all! The truth is, there is a much greater loss in allowing vegetables to stand thickly together, than most are at all aware of. To insure a crop, plenty of seed is sown, with the intention of thinning at the proper time; but when thinning day arrives, it requires rather more nerve to commit what appears to be the merciless havoc of tearing out nine-tenths of the beautifully growing young plants, than most persons possess. A crop of beets has just commenced forming handsome bulbs, precisely one inch asunder in the row; certainly something of the boldness of the surgeon it needs to lay nine-tenths of these withering in the sun—cucumbers are just beginning to throw out their runners and to show their yellow blossoms, and it seems to some a hard matter to tear out three-fourths of the dozen now growing in the hill. It must however be done—all the surplus plants in a bed of beets or turnips, or in a hill of cucumbers, squashes or melons, are to be regarded as so many positive, downright weeds, obstructing the growth of the rest and yielding but little or nothing themselves. If our crops are to be crowded and stunted, we would quite as willingly have it done with pig-weeds and fox-tail, as to have them smothered and the soil exhausted by weeds of their own species.

Many years ago, when the cultivation of the ruta baga was first introduced, we could invariably distinguish the crops of the novice, by the thickly growing, half-developed bulbs. "O! but they had thinned them to a very great extent—they had cut out three-fourths, and reduced them from one inch to four inches in distance," whereas none should ever stand nearer than a foot to each other, if the soil possesses any thing like a fair degree of fertility; but this looked too much like indiscriminate slaughter, and could not be thought of for a moment. The finest specimens of garden products, which we see exhibited at horticultural shows, are those which have been well thinned and allowed every opportunity to develop themselves freely; and the same is true of ornamental plants, where a full, rich, and luxuriant growth and bloom, are obtained through the adoption of the same principle.

**Insect Repellers—Sulphur and Mercury.**

Our readers have no doubt often heard of the use of sulphur in repelling insects from trees, the application being made by "plugging," and the sulphur being diffused through the sap, and rendering the leaves offensive to insect predators. The use of quicksilver has been similarly recommended. The question appears never to have been asked whether either of these substances is soluble in water, and capable of being carried by the sap through the tree, and it has been taken for granted by many that if so diffused, these substances would certainly repel insects. No doubt the operation of boring and pounding in plugs would sometimes tend to drive away such intruders, but this is all that can be said in its favor. At a late conversational meeting of the Massachusetts Horticultural Society, Dr. WIGHT stated, that three years ago he bored a hole into an apple tree, poured in quicksilver, and plugged the hole tight. One year after, he opened the hole and found the quicksilver (as a matter of course) in the same state and in the same quantity as when put in; it had not undergone the least change whatever. In another tree he bored a similar hole, and inserted roll brimstone; a year afterwards it was opened with the same result as the other experiment—not the least change had taken place—the sulphur remained as when put in. The truth is, no other result *could* have taken place

**Destroying Black Ants.**

"My yard and flower garden are much infested with black ants, to the destruction of some roots and some shrubbery. I am unable to drive them away by any method I can devise or learn of others. If you can direct me, you will confer a favor. S. M. B. *Hannibal, N. Y., May, 1853.*"

Not having been much troubled with black ants, we can only recommend the *trial* of the following: With a smooth crowbar, pierce the ground with several holes where the ants are most abundant; into these they will fall and be unable to get out. In sandy or gravelly soil, it may be difficult to form smooth holes, except immediately after a heavy rain, or artificial flooding—on clayey soils it will be very easy. A few quarts of hot water, poured into the holes, will make short work with the prisoners. Cheap tin vessels, six inches in height, and the size of eave-trough conductors, or perhaps wide-mouthed vials, set into holes thus made, could be more perfect traps, and some inviting substance, as molasses or sugar, would doubtless assist in decoying them. The European horticultural journals state that the tomato plant is very offensive to them, and that if the surplus plants which grow in most gardens are pulled up and laid in the vicinity of places infested, the ants will soon retreat. Whether all the different species would be similarly influenced, is another question.

**Cayuga Horticultural Society.**

President—H. T. DICKSON.

Vice-Presidents—P. R. Freeoff, George E. Barber, John Morse, Oliver W. Wheeler.  
Cor. Sec.—Horace T. Cook.  
Rec. Sec.—S. S. Graves.  
Treasurer—John S. Clary.

**Clean Cultivation of Trees.**

The importance of a deep, mellow soil for young trees, kept clean by constant cultivation, is well understood by skilful fruit-raisers, and should be fully appreciated by all, and acted upon at the present season of rapid growth.

Some years since, T. G. YEOMANS, of Walworth, N. Y., well known as a very successful culturist, informed us that his young standard trees, which stood among his smaller trees in his nursery, where they were subjected to continual cultivation, and where the young nursery trees made but little draught on the soil, made twice the growth of those in a field of beets, which were kept hoed well through the early part of the season only, and which, precisely like a large growth of weeds, drew freely on the soil. A similar statement is made in the Genesee Farmer, of an experiment in sowing carrots between the rows of young apple trees. The rows of trees were  $3\frac{1}{2}$  feet apart, and a single row of carrots was sowed between them. Although they were all kept clean during the summer, yet other trees of the same age and treatment, without carrots, made twice the growth.

The owners of orchards, in their great anxiety to get something in the shape of annual crops from the land, often lose ten times as much in the value of fruit. A certain farmer (rather *uncertain*, however, in this instance,) would not sacrifice five dollars worth of pasture by plowing up and leaving bare the ground of his orchard, although it already afforded him fifty dollars per acre in crops, and would have paid him over one hundred per acre in better fruit and more of it, if he had only kept it mellow by plowing and harrowing. The finest market peach orchard we ever saw, in full bearing with very large and delicious fruit, was kept as mellow as an ash-heap the season through, and no crop allowed to grow upon the soil, which the proprietor found by far the best and most economical mode of management.

**The Narrowed Gardens in Cities**

A great deal of skill may generally be exercised in making the best use of such materials as happen to be placed in our hands. Spending a few days with a friend in one of our large cities, we were struck with the great variety of vegetable growth which had been introduced into a space of 25 by 30 feet of ground. It was entered from under the back porch, which was ten feet square; the space between the eaves of this porch and its floor, on one side, was covered with the scarlet trumpet honeysuckle on a simple trellis; from the front roof, projected a trellis-work drooping roof, five feet wide, on which a Catawba grape-vine was handsomely trained,—the whole presenting much of the character of a country arbor. The ground was surrounded by a flower border, and this was separated from an inner flower border, by a walk passing round the whole. In these two borders we counted nearly an hundred and fifty different species or varieties of ornamental plants, a considerable portion in bloom, and a part of them were so trained as to cover the garden walls with verdure. The back offices were covered with one or two fruit trees by fan training, and with a single Boursalt rose spread over a surface of ten feet in width and twelve in height, and on which we estimated the number of about 800 roses in bloom.

at the time. The roof of the back buildings was surmounted by grape trellises, twenty feet above ground, on which vines were trained, forming a handsome sky outline for the back view.

#### The Kitchen Garden.

*Endive, or Chicory*—This, for salad, takes the same place in winter that lettuce occupies in summer, and when well grown is equally valuable. There are two very distinct varieties; the one is curled and narrower in the leaf, and in flavor is bitter, unless it is well blanched, but it forms a large head, as fine as well grown Cabbage Lettuce. The other sort is the “Escarole” of the French, and is sweet in flavor, with a wider and flatter leaf, which comes earlier in the season but does not usually form so close a head, although it is preferable in flavor. Both should be grown in quantity, the latter for the autumn and early winter, and the Curled for keeping in a cellar, laid in close together by the root as we recommended for celery. Sow twice, early in July and the first week in August. The broad leaf, (which is the Escarole,) for the first crop, and the Curled Green, (which is the most hardy) and some White Curled for the second crop. Let the ground be as rich and light as possible. The finest lettuce and endive may be seen growing in the swampy ground near Jersey City, to a size which will satisfy the most sceptical as to the kind of soil that suits such crops best. Sow in drills one foot apart. Thin out to nine inches apart for early crops, and a foot for the Green Curled. When the leaves are from seven to nine inches long, the blanching may be commenced. This is by many carelessly done with plants intended for immediate use, by simply throwing a thin board on the top of the row of plants. But this is such unworkmanlike, slovenly gardening, as we cannot commend. The proper way is to draw the leaves of each plant together with one hand, and tie a piece of bast-mat, or cotton-twist round them; then draw a little earth up to the root. The top of the leaves, in this operation, should be brought close together with the tie, so as to exclude wet; but in the middle the leaves should not be pressed too close. They will blanch in a week or fortnight, according to the weather; a few, therefore, should be tied at intervals as wanted. The way to have it in *perfection* in winter is to grow it in frames with glass lights, and it is well worth the expense of them. But even four boards nailed together with board shutters to lay across in severe weather, will prove a good substitute. The plants may be first grown fine in the open ground, and be transplanted into the frames with a good ball of earth to each, at the approach of winter; and any decayed side leaves being removed at the time of transplanting, they may be placed close together, the object being to preserve them rather than encourage further growth.

*Jerusalem Artichoke*.—This, in reality, is no artichoke at all. It is a species of sunflower. The roots have some resemblance to the potato, but their texture and flavor are very different, and partake more of the character of sea kale and asparagus, although inferior to those valuable vegetables. They grow very tall, frequently ten feet or more, and should therefore be planted where their shade will not be detrimental to other crops; and they will endure any situation, in any out-of-the-way corner, as the shade of trees does not perceptibly

hurt them. They are grown from the roots like potatoes. Light, good soil suits them best, but they will produce a fair crop in any soil. At the approach of winter they should be taken up and kept in sand. They are best boiled and eaten as a vegetable with white sauce.

*Salsify*.—This is sometimes called the Vegetable Oyster, from its flavor bearing some resemblance to that fish. It is a root vegetable, resembling a parsnip. Sow the seed in drills a foot apart in April or May. Thin them out to six inches, and cultivate like other root crops of a similar nature. It is hardy and will stand the winter. Some people use the tops in spring for early greens. It may be stored in sand in the cellar for winter use. B. M.

#### Remedy for the Cherry Slug

Having so often received instruction from the perusal of contributions by practical farmers, dispensed to us through the medium of your valuable paper, I take the liberty to give a little of my own experience.

The cherry slug or snail, makes sad havoc on our cherry trees in this vicinity. I have previously found lime effectual in destroying them. Last summer I tried dry dust, taken from the ground near the tree; with a shovel make it fine, or you may scrape it from the highway, when it is dry and dusty. Apply profusely, that none of the slugs escape a good covering, and my word for it, they will be minus equally as well as if you had used lime. Renew the application as often as necessary. A. S. Moss. *Fredonia, N. Y.*

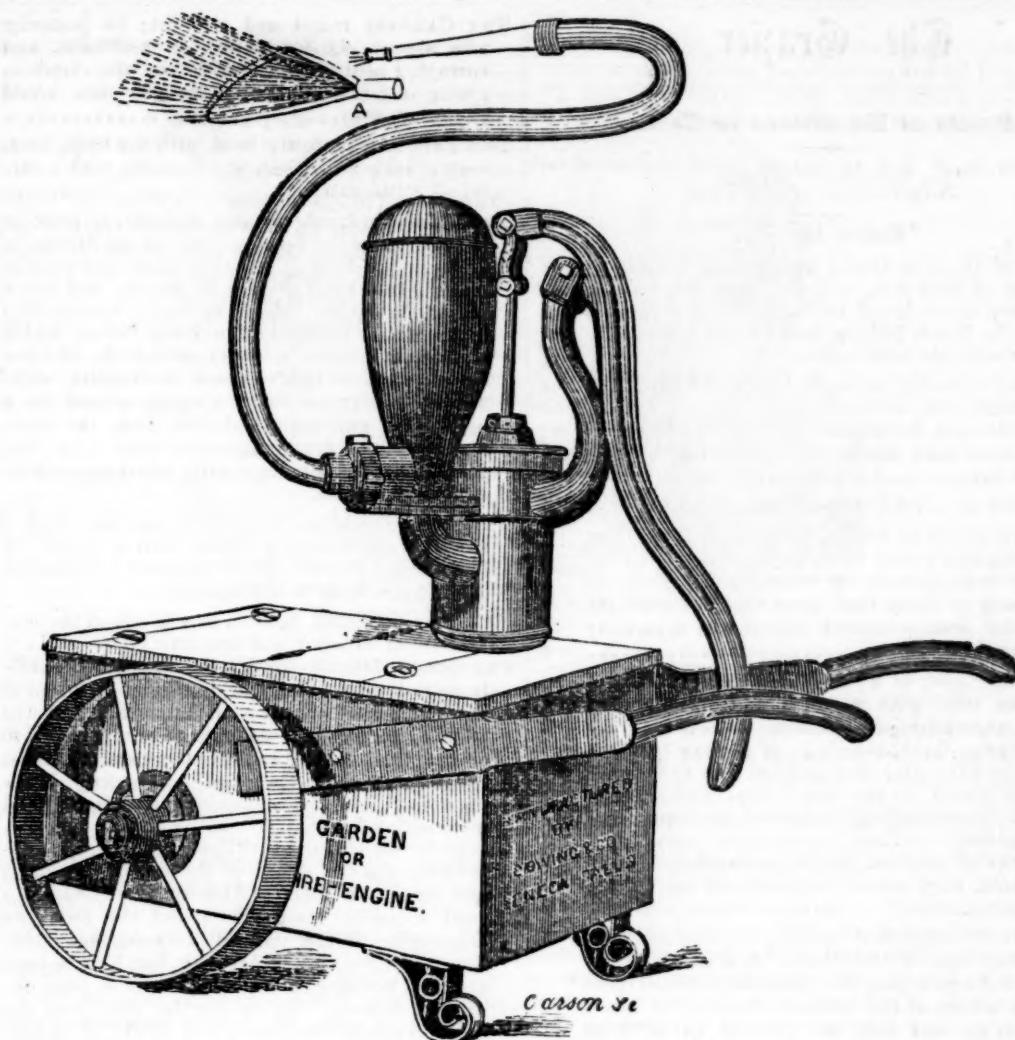
#### Preparing Soil for Grapes.

Dr. UNDERHILL, of Croton Point, who has some thirty acres of vineyard for marketing the fruit, has given much attention to *high culture*, and as a consequence his grapes have attained a high reputation in the New-York market for their excellence.

According to a statement in “The Plow,” he usually applies twenty or thirty bushels of bone dust per acre, and uses largely a compost made of swamp muck, leaf mold, rich loam, sods, weeds, leaves, and grape-cuttings, with stable manure, liquid manure, or yard-drainings, and potash.

He finds that grapes will grow well upon any soil, except heavy brick clay; and this need not be excepted if well drained, and cobble stones deposited beneath each vine, as looseners. He has applied large quantities of clay to his lighter soils; in one instance, five hundred loads to the acre, but this he found too much. Nearly all his land has been trenched three or four feet deep, but a much cheaper mode of trenching has been lately adopted. It consists of first running a trench-plow (the double Michigan would be just the thing) about fourteen inches deep, followed with the largest size sub-soiler, about as much deeper.

*GRAFTING WAX*.—I use for grafting composition 2 parts rosin, 1 part tallow, and 1 part beeswax; put on with a brush, at any temperature that will not burn the brush. This I have used for many years, for all kinds of grafting, and for covering wounds made by pruning, and consider it cheaper and easier applied than any other, and safer. A small iron kettle is best to keep it in. The brush may be made of hair, if bristles are not at hand. L. J. H. *Throopsville, March 28, 1853.*



Garden and Fire Engine.

The above is a representation of a Garden and Fire Engine, manufactured by COWING & CO., of Seneca Falls, N. Y. From the brief experience we have had with one of these machines, we can bear testimony to its value. It is not less useful for washing the outsides of houses, than for watering gardens, and it must prove of great importance in case of fires, as a steady stream of water can easily be forced on any part of a two-story building. Every country place should have one.

#### Remedy for Black Knot on Plum Trees.

For a few years past I have been experimenting on plum trees. A large proportion of them are Yellow Gage, taken from Mr. Lasell's nursery, in Schoharie, among which the black knot prevailed pretty largely. Having removed them fifty miles to Delhi, Delaware Co., and transplanting them there, the knots still affected them. The only prescription made, was mixing in the earth for a few inches, and a foot or two around the tree, *pulverized blacksmith's cinders*.

Since that time, some two or three years past, the ground has been annually dug about the roots, rather freely in the spring of the year; and now they are free from the knots, and they had very few last year. They bore well year before last—last year but little, and now they are full of blossoms with a fine prospect of fruit. I have confidence in this treatment—think that the iron being absorbed into the body of the tree, exerts a tonic power on it, so as to purify its vitiated fluids, stimulating its vital power to a more healthful action;

so that not only the knots are prevented, but a renovation of the health and constitution of the tree is produced. FERRIS JACOBS, M.D. *Delhi, May 18, 1853.*

#### Cure for Rose Bugs.

Among the many remedies given, only one that we are aware of, has ever proved effectual, namely, destroying by first shaking them down on a spread sheet. In some localities where they are abundant on all kinds of vegetation, this may prove totally impracticable, but in ordinary cases they may be greatly thinned without much difficulty. The best mode we have seen described for effecting their destruction, or that which promises the best success, is the following, given in a late number of the Boston Cultivator: In the center of the garden a few bunches of the damask rose are planted, which the rose-bug prefers to everything else, and on which they mostly congregate. When the roses are in bloom, go to these bushes with a broad pan of hot water, and shake or jar the insects into it. By pursuing this practice, they soon disappear.

## The Grazier.

## Points of Excellence in Cattle.

Adopted by the N. Y. S. Ag. Society, for the guidance of the Judges at their Annual Fairs.

## NORTH DEVONS.

PURITY of blood, as traced back satisfactorily to importations of both dam and sire, from known English breeders, or as found in the lately established Herd Book, for North Devons, and without this, an animal cannot compete in this class.

THE HEAD should be small, lean and bony, the forehead wide, flat, or from a fullness of the frontal bone over the eyes, somewhat dishing; the face straight; the muzzle fine; the nostrils open; the lips thin and rather flat, . . . . .

THE NOSE of a light, delicate orange color, . . . . .

THE EYE should be bright, prominent, and clear, but mild and gentle in its expression, as indicative of that spirited, but tractable disposition so necessary to cattle that must bear the yoke; a beautiful orange-colored ring should invariably surround the eye, . . . . .

THE EAR—thin; of a rich orange-color within, of medium size, with a quick and ready movement, expressive of attention, . . . . .

THE HORNS—light, tapering, of a waxy color toward the extremity, and gaily as well as symmetrically placed on the head; the occipital bone narrow, thus bringing the base of the horns nearer together, . . . . .

THE NECK of medium length, somewhat light in substance, very clean, and well set up on the shoulder, . . . . .

THE CHEST—deep, and round, carrying its fullness well back of the elbows, thus affording, by the aid of a springing rib, abundant internal room for the action of the thoracic viscera, the heart and lungs, and that too without an extreme width forward, and between the points of the shoulders, which might interfere with the action of the animal, . . . . .

THE BRISKET—It being assumed that it adds nothing to the internal capacity of the chest, must not overload the breast, but be sufficiently developed to guarantee a feeding property, attended with a full proportion of fatty secretion, . . . . .

THE SHOULDER is, in this breed, a very beautiful and important point, and should in a *degree* approximate in form to that of the horse. It should take a more sloping position than is found in most other breeds, with its points less projecting, and angular, and the blade bone more curved, thus blending with and forming a fine wither, rising a little above the level line of the back, . .

THE CROPS full and even, forming a true line with the somewhat rising shoulder, and level back, without either drop or hollow, . . . . .

BACK, loin and hips, broad and wide, running on a level with the setting on of the tail, . . . . .

THE RUMPS—lying broad apart, high, and well covered, . . . . .

THE PELVIS—wide, . . . . .

THE TWIST—full and broad, . . . . .

THE QUARTERS long and thoroughly filled up between the hooks or hip bones, and the rumps; with a good muscular development down the thigh to the hocks, . . . . .

THE FLANK—moderately deep, full and mellow in proportion to condition, . . . . .

THE LEGS not too short, and standing as square and straight behind, as may be compatible with activity. The bone quite small below the hock and knee; the sinews large and clean, with the forearm well developed, . . . . .

THE CARCASS round and straight; its posterior ribs almost circular, extending well back, and springing nearly horizontally from the vertebra, giving in fact much greater capacity than would at first appear, . . . . .

THE TAIL at its junction level with the back, long, very slender in its cord, and finishing with a tassel of white hair, . . . . .

THE COLOR, in its *shades* and *degrees*, is more or less governed by fashion; but in the Devon is always red. Formerly the rich blood-red was the favorite color, and the test of purity; and now a somewhat lighter color is in vogue, approaching rather nearer to that of the *South Devon*, which is a larger, coarser, stronger animal. In all cases the color grows lighter round the muzzle, while a dark mahogany color, verging almost to a black, and growing yet darker about the head, always was a very questionable color for a *true North Devon*, more especially when accompanied by a dark nose, . . . . .

THE HAIR should be short, thick, and fine; and if showing on its surface a fine curl, or ripple, it looks richer in color, and is supposed to indicate a hardier and more thrifty animal, . . . . .

THE UDDER should be such as will afford the best promise of capacity and product, . . . . .

CARRIAGE—The Devons having, from their excellence in the yoke, another destiny besides that of the butcher's block, it is all important that the animal's carriage should indicate as much; but to obtain this, something of the heavy, inert, squarely moulded frame of the merely beefing animal, must be relinquished for a lighter and more active frame, . . . . .

QUALITY—On this the thriftness, the feeding properties, and the value of the animal depends; and upon the touch of this quality rests, in a good measure, the grazier's and the butcher's judgment. If the "touch" be good, some deficiency of form may be excused; but if it be hard and stiff, nothing can compensate for so unpromising a feature. In raising the skin from the body, between the thumb and finger, it should have a soft, flexible, and substantial feel, and when beneath the out-stretched hand, it should move easily with it, and under it, as though resting on a soft, elastic, cellular substance; which, however, becomes firmer as the animal "ripens." A thin, papery skin is objectionable, more especially in a cold climate, . . . . .

15

100

## POINTS OF THE DEVON BULL.

As regards the male animal, it is only necessary to remark, that the points desirable in the female are generally so in the male, but must, of course, be attended by that masculine character which is inseparable from a strong and vigorous constitution. Even a certain degree of coarseness is admissible, but then it must be so exclusively of a masculine description, as never to be discovered in the females of his get.

In contra-distinction to the cow, the head of the bull, may be shorter, the frontal-bone broader, and the occipital flat and stronger, that it may receive and sustain the horn—and this latter may be excused if a little heavy at the base, so its upward form, its quality and color be right. Neither is the looseness of the skin, attached to, and depending from the under jaw, to be deemed other than a feature of the sex, *provided* it is not extended beyond the bone, but leaves the gullet and throat clean and free from dewlap.

The upper portion of the neck should be full and *muscular*, for it is an indication of strength, power, and constitution. The spine should be strong, the bones of the loin long and broad, and the whole muscular system wide and thoroughly developed over the entire frame.



**"TEN THOUSAND," a French Merino Sheep, owned by S. W. JEWETT and H. S. MORSE, of Vermont.**

This wonderful Ram is the admiration of all who behold him; he is only a yearling, and weighs 224 lbs., with a thick coat of wool, as you see, standing all over him. He has fairly drawn the wool over his own eyes. Is owned by S. W. Jewett and H. S. Morse, and may be seen at the World's Fair in the city of New-York. S. W. J.

#### Training Steers.

A subscriber inquires what is the best way to break steers! To this interrogatory, we say, in the first place, we do not like the term, unless, as is often the case, in bringing animals to the yoke, he wishes to break their necks. In that case, we would recommend to have them grow as wild as possible, until they are two or three years old, and then, by a sudden and powerful effort, try to accustom them to the yoke in the most wild, harem scarem manner possible. In this way, the chances are ten to one that they will soon be broke finally and effectually.

*Break steers*, is an old and very common phrase, we are aware; but as time-honored as it is, and as often as our friends and fathers have used it, and as kindly as they have transmitted it down to us, we do not like it. *Breaking boys!* What an expression that would be in an age of refinement, when the fact in the case assured us, that the wholesome process gone through with, simply meant to educate them. To teach them to forsake what is wrong, and practice what is right for its own pure sake. So we consider the process which accustoms the animal to enter the stall, and the steer to submit to the yoke and practice the operations peculiar to oxen, a system of education and nothing else.

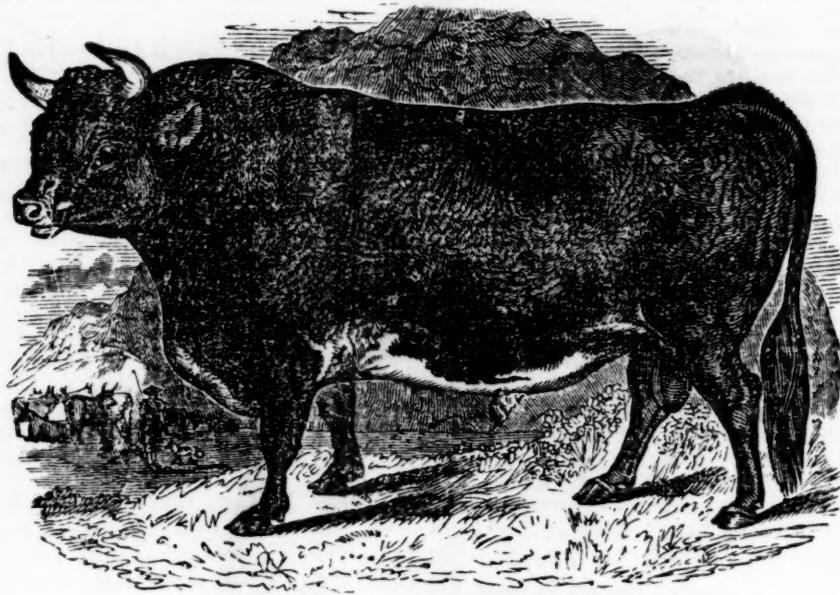
Then we would say of animals as well as men, if you would thoroughly and easily educate them, commence while they are young. In both cases, if this matter is delayed, both animals, the biped and the quadruped, grow wild and less approachable, bad habits are apt to insinuate themselves, indolence becomes characteristic, insubordination takes deep root.

So then, we suppose, and our experience goes to establish the theory, that the earlier steers are trained to the yoke and the habits they are to exercise when grown to oxen, the more useful, valuable animals they will become. We have seen steers accustomed to the yoke, learned to draw light burthens on small sleds, and on the ground—indeed to perform all the feats that old and well educated dignified oxen are expected to perform, the winter before they were a year old. It looks like small business, we know, to be teaching so young animals to haw and gee, to back, turn round and go forward at your pleasure. But it is light, easy labor, to learn them these things then—a great saving of manual

labor from what it is ever after. They are more tractable, and submit to teaching without the fear which comes of age; and then, they acquire habits of gentleness, which will ever after operate to their benefit. These first teachings are never forgotten. If initiated in these things in calf-hood, they will remember them in steer and ox-hood, will always be better and more valuable animals, frequently of larger size than if left to run wild until the age of two or three years. This is shown, from the fact that the more domestic and docile an animal is, the less food it will consume to acquire a given amount of weight. Who ever saw a wild, bellowing animal, the fear of all who approached it, and afraid of coming into near approach of civilized man or beast unless it were in token of warfare, well clad with flesh—of fine and silky hair?

When we were in the habit of raising steers, it was our first practice to learn them to lead by a rope, fastened loosely around their horns. Having them thus equipped with the rope in one hand, and a light switch in the other, we indoctrinated them in the act of going and stopping—hawing and geeing when we pleased, and what was more, of teaching them by kindness, that they had nothing to fear but much to hope from us, for we always gave them a good lock of sweet hay when the lessons of the day were over. After one or two lessons of one or two hours each, in this way, we yoked them, and with the rope still on the horns of the near steer, learned them to act together—accustoming them to the chain and neap as circumstances dictated. A few lessons, which must be a mere pastime for boys to give, inculcated in this way, will settle the matter with them forever. They will come to you more readily when you visit their pasture through the grazing season, and the next winter they will come to the yoke, almost without labor or any of the risks to your own life and limbs, or danger to themselves, which would be consequent on a wild stont pair.

The habit of learning all horned animals to lead, while young, we consider one of great importance to the farmer, for if once learned they will never forget it. It renders them much more docile, and often in the hurry of a busy season, it may save the strength and labor of one or two men, running and foaming to remove them from one place to another, while a single boy may lead them leisurely and easily along. Yours truly, W. B.



West Highland Bull.

The Kyloe or West Highland breed of cattle is one of the aboriginal stocks of Great Britain. Its habitat is the western shore of Scotland, and the Hebridean Islands. It is a hardy breed, better adapted to rough fare and exposure than any other known; it is also remarkable for beauty of form, and for the excellency of its flesh—in the latter particular, excelling all other breeds. It would be a highly useful breed in many parts of this country.

#### Docking Lambs.

In cutting the tail of a sheep, you will find three arteries, two upon the upper side, close to the bone of the tail, and one near the center of the tail, on the under side; this one is much the largest, and the one out of which most of the blood flows when cut asunder.

It is perfectly safe, as to loss of blood, if you tie up the large artery before cutting the tail. First slit down the skin lengthwise, about an inch. The artery, if in a lamb, will be seen about the size of a common knitting needle. Draw a thread of waxed linen or silk under the artery, with the common straight needle, or one a little crooked at the point, is better. Tie up tight before you cut off the tail; which you will sever just below the knot. This is all done very easily, and with very little loss of blood. You may sprinkle a little dust or pulverized alum on to the wound to advantage.

*Gravel*—Lambs, in the winter, are very subject to the gravel. On my second trip to Rambouillet, France, I learned from the chief Bergier how to cure it, if taken in season. It is a simple surgical operation, which I will freely communicate, if applied to. S. W. JEWETT.

#### To Stop a Runaway Horse.

A correspondent of the Boston Transcript, who has seen a mode adopted in Moscow and St. Petersburg, gives the following plan: "Around the horse's neck, near the neck strap, is placed a cord in a running knot. To this slip noose is attached a pair of reins—on gentlemen's horses generally of silk cord, about the size of a pipe-stem—which always lie thrown over the dashboard, ready to be seized at once. When a horse starts and becomes unruly, the gentleman takes up this cord and tightens the horse's throat so that he cannot breath. The most furious horse stops almost instantly, but he will not fall or kick. I have seen many such reins upon high spirited horses, even in common city dhroskies."

#### Charcoal and Salt for Sheep.

A contributor to the North-western Cultivator writes— "It is generally conceded that wet pastures are unfavorable to the health of sheep. I have kept a flock for four years in a pasture of this description—for the first two years with unfavorable results. My sheep were unhealthy and many of them died. I ascribed it to the

wetness of my pasture. Upon the recommendation of an old farmer, I gave the sheep charcoal mixed with salt. The beneficial effects of the mixture were soon apparent. My sheep presented a more healthful appearance. I have continued the treatment, and the animals have continued to thrive. I suppose the medicinal qualities of this mixture consist in the disinfecting property of the charcoal." And in the invaluable tonic and alterative properties of the salt we may add; for, like many other remedial agents, this article when given in small doses, augments the digestive functions. In larger doses it is cathartic.—*American Veterinary Jour.*

#### Management of Poultry.

The following closely condensed hints, copied from an English paper, contain as many valuable suggestions of a practical character, as could be possibly crowded in the same space, and will be valuable to those who cannot read a long treatise:—

**Poultry House.**—"The floor should be cleaned at any rate once a week. It should be sprinkled with sawdust, ashes, peat, or—best of all—peat charcoal. The nests should be lined with moss, heath, or short straw; neither long straw nor hay should be used—the darkest nests are preferred by the hens." A *Poultry Yard* should contain: 1, A grass plot; 2, fine gravel; 3, slaked lime, or other calcareous matter; 4, ashes kept dry by being placed under cover; 5, pure water. **Eggs:** Hens of the best varieties will lay in a season from 160 to 210 each, or, on an average, 185, which, at the rate of even 11d. per score, will realize 9s. 10d. per hen. **Breed:** Evidently the best are the Dorking, and "fowls which have black legs are the best for roasting, while those with white legs are the best for boiling." For laying, the Dutch everyday layers or the Spanish are excellent. **Sitting:** Having observed that the earliest chicks in the neighborhood were every year in possession of the same person, we were induced to ascertain the cause. We found that the eggs were not taken from the nest, and, as soon as she had about 13 she commenced to sit. Fowls indeed, in their native haunts, never lay more eggs in a season than they can hatch. Those who keep Dutch everyday layers, or the Spanish hen, should keep three or four Dorking hens to do the hatching business. Remember that no success can

be expected from poultry keeping—1st, If their houses be damp, cold, unclean, or badly ventilated; 2nd, if the food they eat does not closely approximate to that which they obtain in a state of nature, viz: a mixture of vegetable and animal food; 3d, if the water they drink be stagnant, the drainage of the manure heaps, &c.; 4th, if the strongest and handsomest be not bred from.

**DISEASES AND REMEDIES OF POULTRY.**—Provide if you can a separate place for the sick.

**Chipping.**—This singular and fatal disease of the digestive organs often proceeds from exposure to wet or cold. Remove the chickens to a warm and comfortable place; if they appear very ill put them into wool or flannel; add to half a pint of thick gruel a dessert spoonful of linseed oil, give half a tea-spoonful in the course of the day.

**Flux.**—Is generally produced by too much soft food; change of diet therefore is the best remedy, while rice, a little hemp seed, and whole wheat, are excellent.

**Gapes.**—Give every other day from five to ten drops of spirits of turpentine, mixed with barley meal.

**The Pip.**—Wash the mouth twice a day, with a mixture of equal parts of tincture of myrrh and water, a more simple remedy is to rub some common salt on the sore place.

**The Roup (the Gargle in Geese.)**—This is one fatal result of ill-feeding and want of cleanliness. Medicine can do little, give one grain of antimonial powder twice a day in a little mixed food.

**Vermin.**—Keep them clean; provide and keep dry dust for them to bask in; and also fresh fine gravel for the sake of the small pebbles which they need for their gizzards.

## Domestic Economy.

### Currant Wine.

The following directions for making Currant Wine, were furnished for the Cultivator in 1837, by a Tennessee correspondent, who said—“We are now using some wine, made according to this recipe, and find it decidedly superior to any foreign wine for the table. The imported wines are all too strong.”

“Gather your currants when fully ripe; break them well in a tub; press them through a sifter; then strain them through a flannel bag, and measure the juice. Add two gallons of water to one of juice: put three pounds of New-Orleans sugar; stir it till the sugar is quite dissolved. In straining the juice of the currant, use a hair sieve, and not one of wire; then use a close tow linen-bag, and afterwards a flannel one, to pass the juice through. The juice must not be permitted to stand over night. Observe that the cask be sweet and clean, and such as has never been used for beer or cider, and if new, let it be well seasoned. Do not fill your cask too full, otherwise it works out at the bung, which is injurious to the wine—rather make a proportionate quantity over and above, that after drawing off some of the wine, you may have enough to fill up the cask. Lay the bung lightly on the hole to prevent flies, &c., from creeping in. In three or four weeks the bung hole may be stopped up, leaving only the vent hole open till it has done working, which is generally the middle or last of October. It may then be racked off if you please, but I think it best to leave it on the lees till spring, and if not wanted for present use, it may be left on the lees for two years without damage.

“When you draw off the wine, bore a hole an inch at least from the tap hole, and a little to one side of it, that it may run off clear of the lees. Some put in spirit, but I do not think it advisable. Do not suffer yourself to be prevailed on to put more than one-third juice, for that would render the wine hard and unpleasant, nor too

much sugar, as that would deprive it of its pure vinous taste. It improves by age.”

The annexed recipe, was sent us last year, by a friend in Utica, accompanied by a bottle of the wine made by it, two years old, fully equal to any we have ever tasted.

**CURRENT WINE.**—Strain the currants, which should be perfectly ripe. To each quart of juice, put a couple of quarts of water, and three pounds of sugar. Stir the whole well together, and let it stand twenty-four hours without stirring. Skim and set in a cool place, to ferment slowly. Let it remain three or four days; if at the end of that time it has ceased fermenting, add one quart of French brandy to every fifteen gallons of the liquor, and close the cask tight. Bottle when clear; will be fit for use in six months, and improve by age.

### Green Ointment.

**MESSRS. EDITORS**—I send you a recipe for making a salve, which has in some cases proved very useful. J. P.

**RECIPE.**—White pine turpentine, or white rosin of any kind—beeswax—mutton tallow—fresh butter, or hogs lard—verdigris—olive oil—oil of amber—oil of spike—of each one ounce.

**Directions for making.**—Melt the beeswax, tallow, rosin and lard; then take the vessel from the coals, and put in the oils, and just before congelation commences put in the verdigris, and stir the whole with some convenient paddle, till perfectly congealed. The verdigris must be *perfectly pulverised* before using.

This salve has, under the divine blessing, performed great and wonderful cures on old ulcers, and in other cases where morbid matter required to be drawn through the skin, both on man and beast.

### To Make Pure White Soap.

Take soda in crystals, and put it into a barrel with a layer above of quick-lime, and pour warm water upon it, suffering the liquor to leach out in the same manner that ashes are leached out in the woods for making crude potash. This liquor should be filtered through straw, so as to have it pure and clear. Its specific gravity should be 1.040 in the hydrometer. To every gallon of this lye, 11 lbs. of melted suet or white tallow should be added, and it should be kept boiling gently in a clean kettle for four hours. It should then be completely saponified, which can easily be tested by immersing a flat knife in it. When completely saponified, it will shake on the spatula. The fire should then be drawn from the furnace, and a handful of salt, dissolved in cold water, thrown in. This is to cool the soap and separate it from the water. It can then be run off into frames, and when cool cut it into proper cakes. This is good soap, and is well adapted for making into toilet and other soaps.—*Scientific American.*

**PRESERVATION OF EGGS.**—In your last number, I noticed an advertisement of a recipe to keep eggs fresh a year, and the charge is only one dollar. Now, I will give you a recipe, by which I have preserved eggs fresh since last August, and the recipe that I took it from, said that they could be kept fresh three years, but I have never tried it so long, viz: one pint of lime unslacked, and one pint of salt, to a pail of water. If you consider this worth an insertion in your columns, please do so. A SUBSCRIBER. *Blossvale, N. Y., April 8, 1853.*

**TO PRESERVE EGGS FOR ONE YEAR.**—One pint quick lime, one pint salt, to three gallons water; no care is needed in putting in the eggs, as they will be right end up, and will settle just below the surface if proportioned right. J. M. W. *Ogdensburg.*

He who encourages young men in the pursuit of agriculture is doing a good work for the morals of society a hundred years hence.

## Notes for the Month.

**SHEEP SHEARING FESTIVAL.**—The shearing of the flock of Pure Merino Sheep of ALONZO L. BINGHAM, took place as was advertised, at the Hotel of JAMES K. HYDE, Sudbury, Vt., on Wednesday and Thursday, June 1 and 2. The days were remarkably fine, and a large number of farmers from the Western States and New-York, as well as those of Vermont, were present. The shearing of the sheep was superintended by a committee of disinterested gentlemen, under whose inspection every sheep was weighed after being shorn, and also its fleece. The utmost fairness was used, and an accurate account kept of the whole. We present below the report of the committee, which was kindly furnished us at the time for publication:

*Report of Committee*—The undersigned having been invited to conduct the public shearing of a flock of pure French Merinos, owned by Mr. A. L. BINGHAM of Cornwall, Vt., certify that of the *Eighty Ewes* shorn, *fifteen* have been imported the present year, and from the effects of their voyage, sheared less than others of the same weight of carcass; *twenty* were lambs dropped in February and March, and *twenty* in May and June, 1852; *twenty-four* were two year old Ewes, shorn last season; and *one* a three year old Ewe with her lamb, that gave the heaviest fleece in the flock, viz: 33 pounds. The lightest fleece shorn was *eleven pounds four ounces*. The total weight of carcass of the eighty sheep, after shearing, was 8,240½ pounds, making an average weight of 103 pounds. The total weight of wool sheared from the eighty sheep, was 1,344½ pounds, making an average weight of fleece of 16½ pounds.

GEO. B. CLARK, Leonardsville, N. Y.  
JESSE HINES, Brandon, Vt.  
JOHN LEWIS, Poultney, Vt.  
D. H. PATCHEN, Westfield, N. Y.  
CALEB M. DYER, Enfield, N. H.  
JOHN GREGORY, Northfield, Vt.  
C. D. SWEET, Shaftsbury, Vt.

*Committee.*

It is proper to state that the wool is unwashed, and that its usual shrinkage in cleansing for manufacturing, is *fifty-six per cent*. One two-year old buck sheared 30 lbs. 8 oz. of wool; weight of carcass 216 lbs.

Some fine Hereford cattle, also owned by Mr. Bingham, were shown on the occasion, and the exhibition of Vermont horses, mostly descendants of Black Hawk, was very fine. Among others we noticed a splendid chestnut stallion, owned by I. F. Benson, Esq., of Whiting, Vt., five years old, weighing 1,168 pounds, and possessing fine action; and also a two-year old chestnut stallion owned by Marshall S. Doty, Esq., of Salisbury, Vt., weighing 840 pounds, a very perfect animal. Both of these were sired by Black Hawk, and in form and action strongly resemble their sire.

We have not room to speak at length of the musical entertainment with which "the shearing" was enlivened, or the literary one with which it closed. We will allude more particularly to these another week. As a whole, the affair passed off to general satisfaction, and will not be without a beneficial influence. It is the design of the wool growers and sheep breeders of Vermont, to form themselves into a "Sheep Shearing Club," for the purpose of accurately testing the relative merits of the different breeds of sheep.

Mr. S. W. JOHNSON, our well-known correspondent, who has been studying agricultural chemistry for the past three years, in New-Haven, Conn., sailed for Europe on the 9th of May, in company with M. C. WELD of Hartford, Conn. He goes to Europe for the purpose of continuing his studies under the ablest professors of chemistry in the German universities. We anticipate for him, from his thorough devotion to this branch of science, and his sound and discriminating sense, a brilliant career of usefulness to his countrymen,

when he shall have fulfilled his preparatory course of studies. Mr. WELD is also engaged in the same course of study, and will, we trust, be an able co-worker in the field of agricultural science—a field now almost barren of really able and educated men.

**FOREIGN CORRESPONDENCE.**—Rev. J. A. NASH, of Amherst, Mass., author of "The Progressive Farmer," and who was recently appointed Instructor of Agriculture in Amherst College, sailed for England in the packet ship Northampton, on the 19th inst. Mr. NASH will spend the summer in examining into the systems of agriculture pursued in Great Britain and the continent, for the purpose of better qualifying himself for the new appointment conferred upon him by the trustees of the college; and we are gratified in being able to state that the readers of *THE COUNTRY GENTLEMAN* may expect to hear from him weekly during his absence. We anticipate a series of letters which will prove both interesting and useful to our readers.

At the last meeting of the Massachusetts Board of Agriculture, the following testimonial to Prof. J. A. NASH, was adopted.

*Whereas*, The Rev. JOHN A. NASH, Professor of Theoretical and Practical Agriculture in Amherst College, and a member of this Board, is about to visit England and other countries of Europe, for the purpose of gaining information relating to the science and practice of Agriculture, this Board takes pleasure in testifying to the high personal character and the scientific attainments of Prof. NASH, and to his zeal in the cause to which he has devoted himself; and cordially commend him to the kind regards of the scientific and practical agriculturists, and of all agricultural associations in the countries which he is about to visit.

**OVID ACADEMY.**—We are glad to learn that this institution, which was re-organized last autumn, under a corps of teachers of high character, and with a Department for Agricultural Instruction, is now in successful operation. Arrangements have been made, by which the Agricultural Department will be sustained for a term of five years, in order to fairly test the question as to whether the demand for instruction in the science of agriculture will be such as to warrant the establishment of this branch of education in connection with the usual academical studies. The trustees have been fortunate in securing the services of Mr. WILLIAM H. BREWER, a graduate of the late Prof. Norton's Scientific School at Yale College, as teacher and lecturer on Agricultural Chemistry, Geology, Botany, &c. Mr. B. has devoted several years to the study of agricultural chemistry, and is qualified, by his knowledge and practical good sense, for a correct and efficient instructor; and we are gratified to learn that the attendance in his department, and the progress made by the pupils, has been of the most encouraging character. Thorough instruction, such as we are confident he will impart, will do much to dispel the quackery now so rife on the subject of agricultural science, and we hope this effort to impart it, will meet with such success as to induce other academies to add this to their other studies.

**THE MICHIGAN FARMER.**—This paper is hereafter to be edited by R. F. JOHNSTON, formerly of this city. Mr. J. has much experience, both as a farmer and a printer, and we doubt not that after he "gets his hand in," he will make a capital editor, and we bespeak for him the good offices of the friends of agricultural improvement in Michigan.

**"CONSTERNATION."**—We learn that E. W. CAHILL, Esq., of Dalton, Wayne county, Ohio, has recently purchased of Col. BURNETT, of Syracuse, one of Constenation's best stallion colts, with a view to improving the stock of horses in that section of Ohio. The colt was out of a Messenger mare, and is represented to be in many respects a very remarkable one. He will be three years old in September, and promises to be fast, large and handsome. The price paid was about \$500.

"MEMORIALS OF JOHN PITKIN NORTON," is the title of a handsome volume issued by the family of the late Professor NORTON, for private distribution, and to whom we are indebted for a copy. It has for a frontispiece, a correct and life-like portrait of Prof. NORTON, and embraces the funeral sermon occasioned by his death, preached by Rev. Dr. PORTER, of Farmington, Conn., the biographical sketch published in *The New-Englander*, and the obituary notice published in *The Cultivator*, and some other papers—the whole forming a beautiful tribute to the memory of one whose early death was alike deeply deplored by personal friends and the public. The more we learn of him—of his Christian character—of his amiable, modest and unassuming deportment—of his thorough devotion to the cause he had espoused, the more deeply do we lament that one thus lovely and gifted, and so highly favored by a benevolent Providence in all the circumstances of his life, should have been taken from us at a time when his public labors, extensive and influential as they had already proved, were daily becoming more important and necessary to the progress of agricultural science. We hope an edition of this volume, or a memoir prepared for the purpose, with a selection from his writings, will, ere long, be given to the public.

**LIMING AND ANALYSES.**—A scientific correspondent writes, in relation to this subject:—"No doubt the analyses of soils are useful or satisfactory, though I think they have been much over-rated. If I recollect right, in Dana's Muck Manual, he sneers at the idea of *liming* land, because it is cheaper and better to apply *specific manures*. Every one to his fancy; but South Eastern Pennsylvania would have been a comparatively barren district without lime; and more especially as plaster loses much of its effect, unless the land be limed. Still I object not to chemical analysis, if we expect not too much from it."

☞ The *Working Farmer* demands an apology from us for "having given publicity to an analysis of the super-phosphate of lime under false colors," having asserted, as he says, that it was made by "Professor Johnson" of Yale College. Will "Professor" MAPES have the kindness to point out the page in *The Country Gentleman* or *The Cultivator*, where we have favored our correspondent, Mr. S. W. JOHNSON, with the title of Professor in Yale College? We certainly think Mr. J. more worthy of the title than many to whom that euphonious sobriquet is attached, inasmuch as he is one of the most thorough and devoted students of agricultural chemistry, that our country has produced. Farther, after pursuing a course of study with Prof. Norton, at the Laboratory of Yale College, he did honorably hold the chair of Professor of Chemistry in the State Normal School, which gives him full claim to the title. But one of Mr. Johnson's virtues is modesty; and when he saw the title of "Professor," attached to his name in an advertisement in our columns, he requested that, as its use might mislead the public, it should be removed. He also wrote to Longett & Griffing of New-York, stating that he "was not, and did not expect to be Professor in Yale College," who forwarded his statement to us. We did not, however, consider the matter of sufficient importance to allude to it. There will be sufficient time to defend Mr. Johnson, when his analyses are shown to be incorrect by better authority, and his statements disproved.

Having never "favored Yale College with a Professor not known to its faculty," we suppose we shall be allowed to continue our "agricultural labors" till some more serious, or at least truthful charge is brought against us. In the meantime, we beg leave respectfully to solicit the attention of "Prof. J. J. MAPES, L.L.D." to an article on the 53d page of the May No. of the *Penn. Farm Journal*, which, in our humble opinion, is more worthy his serious consideration than the innocent, though erroneous attachment of "Prof." to the name of our correspondent. By the way, while on the subject of titles, will Professor Mapes be pleased to in-

form us in what Institution he has had the honor to be a "PROFESSOR," and what Institution did itself the honor to confer upon the editor of the *Working Farmer* the degree of L.L.D.? We are not disposed to doubt that he came legitimately enough by his prefix and suffix; we only wish to know what college deserves the credit of thus distinguishing the gentleman.

**NEW STEAM DRYER.**—Attention is invited to the advertisement of Mr. BULKLEY, of Indiana, in this paper. The invention, if it equals the promise it affords, is an important one, and will prove of great value, especially to the corn-growers of the west, as by it the meal may, at a comparatively trifling expense, be so prepared as to secure its safe shipment to any part of the world. Mr. B. has sent us six beautiful samples of meal and hominy, which were all made at one grinding, and kiln-dried at the rate of twenty bushels per hour. The cost of the operation, Mr. B. informs us, is about two cents per bushel.

**WHEAT AND STRAW.**—Boussingault gives the following, as the ordinary proportion in weight between the grain and straw, as quoted from different observers, and it may be worthy of notice in this country, where straw is becoming a valuable product, and where a crop of thirty bushels of wheat per acre, will in the same average rates, give about two tons of straw.

Thaer, .....	grain, 1000.....	straw, 2000
Podevils, ....	" 1000.....	" 2857
Berger, .....	" 1000.....	" 2292
Block, .....	" 1000.....	" 3030
Dierexen, ....	" 1000.....	" 2564
Schwertz, ....	" 1000.....	" 2272

Every farmer is aware that the character of the season has a marked influence on the relative proportion of each, some years yielding large, well filled, heavy grain, on a small amount of straw, and others an abundance of straw, with small light heads of grain. Boussingault mentions an instance of crops grown in two consecutive years, differing most strikingly in this respect, the first (1840-1) the season was very wet; the second, (1841-2) was remarkable for extreme drouth, both presenting extraordinary extremes. In these two years, the weight of the grain to the straw was,

1840-1, 1000 grain to 4162 straw.
1841-2, 1000 " to 1116 "

**CONNECTICUT VALLEY FARMER AND MECHANIC.**—We have received Nos. 1 and 2, of a monthly journal with this title, established at Springfield, (Mass.) by S. Bowles & Son, and edited by Wm. B. CALHOUN, Esq., a gentleman, we infer from the Nos. before us, well qualified for the task. We have not seen a new paper for a long time, that pleased us as well as this. We refer to another page for a very interesting article on the "Flax Culture and Manufacture," copied from this paper.

**THE SOUTHERN AGRICULTURIST** was commenced at Laurensville, S. C., at the beginning of the present year, under the editorial management of our old friend Col. A. G. SUMMER, and his brother Wm. SUMMER, one of the best horticulturists of that State. It is ably and judiciously edited, and we hope it will receive the large support it so richly deserves. R. M. Stokes publisher—monthly at \$1 a year.

**THE KENTUCKY CULTIVATOR** is published monthly, at Covington, by JOHN ATKINSON, at \$1. With the No. for June, it entered upon its second year.

**THE IOWA FARMER AND HORTICULTURIST** has made its appearance at Burlington. It is a dollar monthly, and is edited by J. W. GRIMES and J. F. TALLANT. It is worthy of a large circulation, and if properly supported, and cannot fail of accomplishing much for the benefit of this new and flourishing agricultural State. If it shall accomplish its mission as successfully as has the *Prairie Farmer* at Chicago, its editors and proprietors will richly deserve the gratitude of their countrymen. [In relation to the error which it points out in the 17th No. of the *Country Gentleman*, it is proper to

say that it occurred in the "News Items," and was cut from a New-York paper, and not seen by us until this notice called our attention to it. The sentence should, probably, have read—"Carbonic acid gas of sufficient strength to extinguish a lamp placed on the floor, was discovered."]

The report from Washington now is, that D. J. BROWNE of New-York, is appointed Agricultural Clerk in the Patent Office, instead of W. S. King, as heretofore stated. Mr. B. is the author or compiler of several works, and has for years past given much attention to agriculture, having been, we believe, for some years, one of the editors of the American Agriculturist.

**COL. SHERWOOD'S CATTLE SALE.**—The sale of Col. Sherwood's Improved Durhams, took place, agreeably to advertisement, at his beautiful residence at Auburn, on the 8th of June—Col. J. M. Miller of New-York, officiating as auctioneer, who performed his functions in his usual satisfactory manner. There was a large attendance of gentlemen from different and distant parts of the Union, who, as is evinced by the results of the sale, came to purchase. The prices, it will be seen, range higher than at any previous sale ever held in the State. The sales were as follows:

COWS AND HEIFERS.

1. Pansey 3d, 7 years, J. G. Brasee, Lancaster, O., . . .	\$450
2. Pansey 4th, 3 years, P. Loillard, Westchester Co., . . .	525
3. Phantom, 6 years, J. J. West, Illinois, . . . . .	210
4. Phantom 2d, 3 years, A. Clemens, Philadelphia, . . .	300
5. Phantom 3d, calf, S. Bush, Sullivan Co., N. Y., . . .	150
6. Ozema, 5 years, J. G. Brasee, . . . . .	240
7. Ozema 2d, calf, J. W. Titus, Dutchess Co., N. Y., . . .	165
8. La Polka, 5 years, do do	215
9. La Polka 2d, calf, do do	170
10. Poppy, 7 years, do do	215
11. Poppy 2d, 3 years, S. Bush, . . . . .	295
12. Nighshade, 7 years, A. Clemens, . . . . .	260
13. Pet, 6 years, J. W. Titus, . . . . .	310
14. Pet 2d, 3 years, Wm. Kelley, Rhinebeck, N. Y., . . .	400
15. Pet 3d, calf, John Foster, Canada West, . . . . .	300
16. Nymph, 9 years, W. S. Ward, Westchester, . . . . .	220
17. Topsey, 1 year, J. G. Brasee, . . . . .	160
18. Surah, 2 years, H. Fellows, Sennett, N. Y., . . . . .	125

BULLS.

1. Vane Tempest, imported, 3 years, J. P. Robinson, Wisconsin, . . . . .	1,070
2. LaFayette, 1 year, J. P. Robinson, Wisconsin, . . . . .	310
3. Gen. Putnam, 2 years, J. J. West, Illinois, . . . . .	300
4. Powhattan, calf, H. Baily, Westchester, N. Y., . . . . .	310
5. Novelty, calf, J. P. Robinson, . . . . .	215
6. Petrarch, calf, J. G. Brasee, . . . . .	400
7. Pope, calf, J. P. Robinson, . . . . .	230
8. Dragon, 2 years, A. Beach, White Plains, N. Y., . . . . .	130
9. Dandy, 1 year, J. P. Robinson, . . . . .	170
10. Irishman, calf, A. Beach, New Jersey, . . . . .	135
11. Locofofo, calf, do do	90

TOTAL.

9 cows, average \$265 each, . . . . .	2,120
10 heifers and calves, average \$261, . . . . .	2,610
11 bulls and bull calves, average \$305.45, . . . . .	3,350
	\$8,080

**GUANO AND POUDRETTE.**—In an interesting article on the "Manure Trade of New-York," in the last *Agricultor*, the following estimates of the sales of these two articles, is given. Of guano, it says—"We have ascertained from Theodore W. Riley, agent of the Peruvian government for this city, that the sales of guano in the year 1852 were, to go to Philadelphia, 2,671 tons; to go to Delaware, 680 tons; to New-Jersey, 112 tons; to Long Island, 3,134 tons; to Connecticut, 119 tons; to Boston, 151 tons; to New-York city buyers, mostly to the retail dealers, 1,720 tons—making 8,587 tons to Northern farmers. The sales to Boston, Connecticut, and New-Jersey, will be much increased this year. The sales both from here and Baltimore, to be used south of Delaware, are much greater than for use at the North. Long Island appears to be ahead of all Northern sections in the use of this great fertilizer. A considerable portion of that set down to New-York buyers goes to the island."

After describing the establishment of the *Lodi Company Poudrette Manufactory*, it says—"The poudrette is put up in barrels, averaging four bushels each, which are sold at \$1.50 each, in New-York. The sales at the office, 74 Cortland-street, last year, amounted to 7,127 whole and 50 half barrels. At the factory, 12,000 bushels in bulk, principally to Jersey farmers, in Essex co., at 25 cents a bushel. This will make a total of 10,157 barrels, which includes considerably more than half of all the ta-feu made by the million of people in and around this city, which ever finds its way back to the soil from whence it came. The sales of 1853 will be considerably increased, as the facilities of manufacture have been very much increased this year, till the factory is capable of using all the material that can be obtained, as much the largest portion goes into the sewers, or is dumped off the docks into the river.

**TERRA-CULTURE.**—I am an old farmer, and commend you for your efforts to improve the state of agriculture in our country. I think you deserve some credit also for your notice and remarks about modern terra-culture, which has attracted a degree of attention in some localities of the State, and for aught I know is still rising in the world. Having had the benefit of one or two lectures on this subject, I feel constrained to say my practice upon it has not resulted in the increased profit and enlarged growth I was led to expect from it. Indeed, the way my crops turned out *shallow* last year, was a pretty good caution to agriculturists in general, and terra-culturists in particular. But I may get a benefit for my two lectures after all, for by them, together with my late practice, I shall be induced to go rather deeper into the art and mystery of terra-culture, than I have heretofore done. H. L. D. Moreau, N. Y.

**RED CEDAR FOR HEDGES.**—In your paper of May 12th, I noticed an article from the "Rural New-Yorker," recommending the Red Cedar for farm hedges. The fact that the cedar is perfectly hardy, adapts itself readily to any soil, and is very long lived, as well as highly ornamental, strongly favors its use as a hedge. But I have observed in planting the cedar or other evergreens, in places where cattle have access, a propensity the cattle seem to have, for attacking the trees with their horns, plunging into, and tearing them in such a manner as to destroy, in a very short time, fine vigorous trees of from six to eight feet in height. I wish to inquire through your paper, if others have noticed this difficulty, and if so, in what way it may most easily be overcome. Will some one who has had experience in the matter, reply? FRANK LINDEN. Near Buffalo, N. Y., May 18, 1853.

**NOTES.**—I too have used grafting wax made with oil for two years past, and wondered why I lost a greater number of grafts than heretofore, when using a different compound. From what has of late been said thro' your columns in regard to this matter. I am inclined to the opinion, that the oil, as stated by your correspondent, is injurious.

In regard to the Yam Potato, I would endorse all that is said of them by Messrs. Thorburn & Co. I have raised them for three years past, and find them more hardy and productive than any potato I have yet found, and are of good quality for the table. The last year's crop was the best I have yet raised.

I have kept the Dorking fowls for several years, and find them excellent in every respect. My stock was obtained from the importations of the well known F. Rotch, Esq., of Morris, N. Y., which is a sufficient guarantee of its purity and excellence. D. D. DEVOE.

**BURLINGTON COUNTY, N. J.**—We give the following extract from one of our subscribers in this county:—"There is a deep interest felt in improved agriculture in this county, (Burlington,) and if every farmer had the Cultivator in his family, for himself, his sons and workmen, to become acquainted with the great amount of information there contained, we should soon be in

advance of all others not embracing this means of improvement. We have had excellent exhibitions at Mt. Holly, but heretofore our members and the distribution of premiums have been restricted to this county; at the last quarterly meeting, that restriction was removed from the constitution of the society. By this change, persons from any county in our State or Union, by associating with the society, may contribute to our annual fairs, and compete for the various premiums; the object being to bring forth the finest productions, and Burlington county has determined not to be beaten."

**YIELD OF CORN.**—Being absent when your paper first arrived, it was not until to-day, that I observed the omission to mention the number of bushels of corn per acre, in the second article of No. 18 of the *Country Gentleman*. It is from 55 to 60 bushels shelled, on fields of 8 to 10 acres; and in one instance, but a fraction less than 65 bushels, where the ground was thoroughly underdrained. *C. Lansing, May 7, 1853.*

**CORN FOR FODDER.**—In perusing one of your late numbers, I saw an article on this subject. Now the question naturally arises which is the most profitable kind to sow for this purpose. I have raised several crops with good success, from our eight-rowed yellow; but having spent some three years among the corn growers of Ohio, it occurred to me that the Ohio corn would be just the thing for us to sow for fodder. About the first of June, 1852, I plowed about one-fourth of an acre of ground. I then procured half a bushel of Ohio corn, and sowed it on half of the above named ground, and sowed the balance to the same quantity of our eight-rowed yellow. And now the contrast. The yellow grew well; but compared with the Ohio, it was small. In the ground where the Ohio was sowed, stood a row of Plum trees—the highest one was between 11 and 12 feet; and by the 15th of September, not a particle of them could be seen. The corn was cut and fed to my cows, and kept green until severe frost. Is not the Ohio corn the most profitable to sow for fodder? *T. S. M. Westmoreland, Oneida Co., N. Y.*

#### Answers to Inquiries.

**STONES FOR DRAINS**—In some of my fields are wet spots of an acre or two, which I am anxious to drain, but there is no tile in this region of country, and as timber is too valuable to be used in that way, I am at a loss how to go at it. The land is undulating, affording a pretty good fall to carry the water off, and there is plenty of stone at hand. Now how would it do to make "blind ditches" of stone; what depth and width should the ditches be; what the best mode of cutting them, and how near together; how deep the filling of stone in the ditches, and what size should the stone be used? *G. Bardstown, Ky.*

Tiles form the most perfect drains in all kinds of soils, but in all others, except those partaking of the nature of quick-sands, stone may be substituted. Tile drains are the most easily constructed, but as stone cost nothing in most cases, they compensate in part for the increase of labor in making them.

The mode of construction must vary with the nature of the soil. They are most easily and safely made in clayey land, which is so adhesive that little difficulty ever occurs by the earth falling in among the stones. On such soils, the stones may be filled in so as to reach within a foot or so of the surface. But on sandy soils, possessing little tenacity, and where there is great danger of the earth "caving in" among the stones, eighteen inches or two feet of earth should be placed above, and every precaution used to prevent the disaster just spoken of; such as a layer of very small or flat stones on the top, or a layer of clean gravel; and in addition to this, we have formed a covering of slabs (of some durable wood) placed on the stones, barely sufficient to preserve the earth in its place, before the coating of straw or inverted turf is applied.

If the quantity of water to be drawn off is quite small,

a promiscuous filling in of small stones, will afford sufficient drainage; but when it is large, a special channel must be made for the current. This is accomplished by depositing a row of stones on each side of the bottom, so as to leave a channel in the center some two or three inches wide, and the same in height. This is covered with broad or flat stones, and the rest then filled in promiscuously. If the bottom of the ditch is of soft sand, it will be necessary to lay a harder foundation in the first place, of flat stones, or of durable slabs or boards—the same care will be needed if the descent is rapid, so as to endanger it by washing the bottom earth.

The depth of the ditching should not be less than two and a half feet; three feet would be better; and where the whole surface needs draining, they should not be more remote from each other than thirty feet, unless the soil is gravelly; in which case forty feet will answer. A width of ten or twelve inches at the bottom will be necessary to admit of laying the stone channels properly. If the stone should not be more than two or three inches in diameter, they will be better than larger, affording more numerous interstices, and lessening the danger of becoming choked. No stones larger than five or six inches in diameter should ever be put in under any circumstances.

**TIME TO SOW PLASTER.**—I see that one of your correspondents asks the best time to sow plaster on meadows or pasture, and wheat. I have been greatly benefitted by the use of plaster for the last thirty-five years, and on different kinds of soil, in different towns and counties. I have found it most effectual on sandy and gravelly soils—sandy loam nearly as good—less on clay soils. The best time of using, after long experience, is, from the middle of April to middle of May—best sowed every spring, one bushel per acre, or two bushels once in two years, to save labor. For wheat, roll the seed before sowing. Plaster corn when first up. Drop it in the hill with potatoes, and when beginning to set. *A. K. BARRETT. Magnolia, Rock co., Wis.*

**GUANO AND BONE-DUST.**—In answer to L. H., who inquires for information relative to the application of these manures, we would refer him to page 52, 2d column, and page 131, 3d column, of the *Country Gentleman*; and page 87 current volume of the *Cultivator*. One hundred pounds of Peruvian guano are thought by chemists to be worth about one two-horse load of stable manure, provided the guano is applied in the best manner; that is, one load of stable manure is about equal in value, to one dollar and a half in guano. Experience, in most cases, gives nearly the same results, and our correspondent can infer from this which will be the cheapest. Bone dust dissolved by sulphuric acid, and thus converted to a super-phosphate, is nearly or about as powerful as guano, better for some crops and not so good for others, and may be applied in the same way. Undissolved dust will vary in effect with its fineness, but it is not so powerful by several times, as the super-phosphate.

**G. S. M'C., Brockville, C. W.**—For Devon Cattle, see advertisement of the Messrs. WAINWRIGHT, published in the recent numbers of this paper. We know of no new Oxfordshire or Improved Cotswold Sheep for sale in this vicinity.

What is the best work on flowers, plants and shrubs—their propagation, management, &c. *D. D. D.*

The "Companion to the Flower Garden," by Mrs. Loudon, edited by A. J. Downing.

**THE WATER RAM.**—I saw in your last paper, a request for information concerning the Hydraulic Ram? I have had one in operation two years next July, and am perfectly satisfied. We bring the water one hundred and thirty-six rods, and elevate it one hundred and thirty-five feet, with thirteen feet fall. It discharges a gallon in three minutes. The drive pipe is forty feet long, one and a half inch bore—the small pipe half inch. The Ram is No. 5, and the cost about \$15. The most expense is the pipe. It goes from fall until spring without stopping once, and all that ever stops it is when

leaves get into the spring and turn off the water; but this you will perceive is no fault of the machine; the spring is in the woods. The whole cost of ours was two hundred dollars. **HENRY S. BURT.** *Norway, N. Y.*

**DORKINGS.**—Observing in the last number of your valuable journal, an inquiry for pure bred Dorking fowls, I will say they can be procured of Dr. EBEN WIGHT, of Dedham, Mass., and also of Prof. JONATHAN RAMSEY, of Middletown, Conn., who has some pearl white, recently imported, and fine bred birds. **F. I. Hartford, May 18, 1853.**

#### Information Wanted.

**STRAWBERRY BEDS DESTROYED.**—I have a large strawberry bed in my garden, that has, during the two past years, been nearly destroyed by the ravages of a small worm of the slug species. Its first appearance, (about the first week in July,) is upon the leaves, upon which it remains until the whole life is eaten out; and in August last, my whole bed looked as though fire had passed over it. The worm is of a brownish color, and has not the glutinous appearance appertaining to the cherry tree slug. I have seen many beds in this vicinity affected by the same cause. Snuff, ashes, soap-watter, &c., have been used to no purpose.

If you, through your valuable journal, can inform us of a remedy, either to be applied now, or at the time of the first appearance of the worm, you will confer great obligation upon many, together with your obedient servant, **SHEPHERD WATSON.** *Lowell, Mass.*

**APPLICATION OF MANURE.**—There is one question which I would like to have answered—Which is the best way of applying manure? After all that has been said and done on this matter, I am unable to find it out yet. Scarcely any two farmers practice the same method. Are their various modes all equally good? **H. L. D.**

**SNAP DRAGON.**—I would be under many obligations to you or to any subscribers of the C. G., if you or they would give us the most effectual means of removing a very troublesome weed, called by some Snap Dragon, Jacob's ladder, and various other names. **A SUBSCRIBER.** *Schaghticoke, May 27, 1853.*

**DAY AND MARTIN'S BLACKING.**—Can you or any of your subscribers give the receipt for Day & Martin's liquid blacking? It has been published within a few years, in one of the scientific journals of the day, but I forget which. It would, no doubt, be acceptable to many of your readers beside **D. F. Long Island,** *May 23, 1853.*

**WHALE OIL SOAP.**—May I inquire through your paper of what materials whale oil soap is composed, and how manufactured. **D. D. D.** *Huron, May 14, 1853.*

#### List of State Fairs for 1853.

Vermont, . . . . .	Montpelier, . . . . .	Sept'ber, 13, 14, 15.
Kentucky, . . . . .	Lexington, . . . . .	13, 14, 15, 16, 17
New-York, . . . . .	Saratoga, . . . . .	20, 21, 22, 23.
Ohio, . . . . .	Dayton, . . . . .	20, 21, 22, 23.
Pennsylvania, . . . . .	Pittsburgh, . . . . .	27, 28, 29, 30.
Michigan, . . . . .	Detroit, . . . . .	28, 29, 30.
Wisconsin, . . . . .	Watertown, . . . . .	October, 4, 5, 6, 7.
Indiana, . . . . .	Lafayette, . . . . .	11, 12, 14.
Virginia, . . . . .	Richmond, . . . . .	Nov'ber, 1, 2, 3.

**AMERICAN INSTITUTE.**—At the recent annual meeting of this Association, the following officers were elected for the present year:—

President—**JAMES TALLVADGE.**

Vice Presidents—**Robert Lovett, Robert L. Pell, D. M. Reese.**

Cor. Sec'y and Agent—**Adoniram Chandler.**

Recording Sec'y—**Henry Meigs.**

Treasurer—**Edward T. Backhouse.**

**PUTNAM COUNTY AG. SOCIETY.**—We have received the List of Premiums to be awarded by this Society at its next Fair, which is to be held at Carmel, on the 4th and 5th of Oct. **T. B. ARDEN,** Philipstown, Pres.—**G. M. BELDEN,** Carmel, Secretary.

#### WOOL MARKET.

**New-York, June 17.**—A few hundred bales of the new clip of wool, mostly from neighboring districts in New-Jersey and this State, have arrived, and of these a few parcels have been sold. We note an easier feeling in the market, and prices have given away about 5c per pound since the new clip has been coming forward. The sales are very light of either new or old clip, as manufacturers are mostly looking unto the interior market for their supplies. By going to the wool grower they have to give higher prices than by waiting till wool comes forward to the Atlantic markets. The sales have been about 30,000 lbs. domestic fleece, at 45a60c. The parcels of New wool brought 47a53c; the latter for half-blooded Merino. There is a fair demand for, and supply of pulled wool. We notice one large sale on Wednesday of 40,000 lbs. on p. t. and about 60,000 lbs in lots during the week, at 55c for extra country pulled, 50c for super, and 45c for No. 1.

**Syracuse, June 16.**—The prices now offered for wool are full ten cents higher per pound than last year. We quote as follows: Common grades 35 to 40 cents,  $\frac{3}{4}$  and full blood, 45 to 50 cents.

**SALE OF WOOL.**—We learn that Messrs J. M. Ashbrook and James T. Church, of Pleasant Township, recently clipped 1,425 sheep, yielding some 4,275 lbs. They sell 1,100 fleece at 55c per lb., and the balance for 50c. Wool is now rating at high figures, and no fears are entertained, we believe, of a decline in the price.—*Lancaster (O.) Gazette.*

#### Atkins' Self-Raking Reaper.

**THIS** machine is now offered to the public and warranted to be a good self-raking reaper. It is also believed to be a good mower, but not yet having been sufficiently tested in grass (though it soon will be) it is not warranted to be equal to a machine made mainly or wholly to mow.

The raking apparatus is of novel and very simple construction, and not liable to derangement, and every farmer who has seen it in the harvest field, says it performs the raking better than a man can possibly do it.

Price of machines at Chicago, \$175, of which \$75 must be paid on giving the order, \$50 upon successful trial, and \$50 in note payable 1st December.

The machines are most thoroughly built and warranted.

Descriptive circulars, with cuts, sent to post-paid applicants.

**J. S. WRIGHT.**

**"Prairie Farmer" Warehouse Chicago.**

June, 1853—25—w12t.

#### Harvest Implements.

**MOWING AND REAPING** Machines of different patterns, and of the best kinds in market.

Scythes, Snaths, Cradles, and large Hand Rakes, made expressly for raking after the cart; also Horse Hay Rakes.

Pitchforks, very superior, of elastic steel.

Threshing Machines and Fan Mills, combined or single.

Horse Powers of the most approved kinds, such as the Endless-chain or Railway, Circular, Cast Iron, &c.

Futa Baga, Turnep, Cabbage, and all other sorts of Field and Garden Seeds.

**R. L. ALLEN,**

189 & 191 Water-st., New-York.

May 19—w—20, 23, 26; 29—m2t

#### Bulkley's Patent Dry-Kilns, for Grain, Flour, Meal and Lumber.

**RIGHTS** to use these dryers, for sale in any town or State in the Union. These machines kiln dry by steam heated when necessary to 600 or 700 deg., and combining cheapness, compactness, safety and speed. They are built at less expense, occupy less room, take less fuel and power, less danger of fire, and are less liable to get out of repair, as well as capable of doing more work, and in a better manner than any other dryer. May be built portable or stationary.

A portable machine now in use in this place, which is 8 ft. long, 5 ft. high, and  $1\frac{1}{2}$  ft. wide, is drying meal at the rate of 650 lbs. per day, and cost to build, \$130. Larger sizes, and stationary machines cost less in proportion.

The sap from inch lumber may be removed in from 24 to 48 hours, by using the steam at 500 deg. Cost of machine to kiln-dry 2500 ft. per day, \$30 to \$40, including the cars to pass the lumber in and out of the dryer. May be built of any size. On a late trial, 1200 lbs. of water were removed from 1000 ft. of lumber in 13 hours. Steam seasoning at 500 deg., increases the strength of lumber two-fifths to five-ninths, and it will then take a higher polish. See description in *Scientific American*, July 3, 1847, and March 26, 1853.

Address **H. G. BULKLEY,** or **Hon. H. L. ELLSWORTH,** LaFayette, Indiana.—May 26—w2t—m1t

#### Suffolk Pigs.

**O**f pure blood, for sale by **B. V. FRENCH,** Braintree, Mass.

**THE WATER-CURE JOURNAL.**—A New Volume.—Now is the time to subscribe.—Published monthly, in a beautiful quarto. Illustrated with engravings, exhibiting the Structure, Anatomy, and Physiology of the Human Body, with familiar instructions to learners. It is emphatically a Journal of Health, designed to be a complete Family Guide in all diseases.

**TERMS**—Only One Dollar a year, in advance. Address, post-paid, **FOWLER'S AND WELLS**, Clinton Hall, No. 131 Nassau-street, New-York.

“The Water-Cure Journal holds a high rank in the science of health; always ready, straightforward and plain-spoken, it unfolds the laws of our physical nature without any pretensions to the technicalities of science; but in a form as attractive and refreshing as the sparkling element of which it treats.”—*New-York Tribune*.—22—w3t—m1t.

**THE ILLUSTRATED AMERICAN PHRENOLOGICAL JOURNAL.**—Devoted to Phrenology, Physiology, Mechanism, Education, Agriculture, the Natural Sciences, and General Intelligence, profusely illustrated with Engravings. Every family, and especially all young men and women, should have a copy. Published monthly at One Dollar a year. All letters should be post-paid, and directed to **FOWLER'S AND WELLS**, Clinton Hall, No. 131 Nassau-st., New-York.

Young men about launching forth upon the activities of life, and anxious to start right, and understand their course, will find this JOURNAL a friend and monitor, to encourage them in virtue, shield them from vice, and to prepare them for usefulness and success in life. The various occupations will be discussed in the light of Phrenology and Physiology, so that every one may know in what pursuit he would be most likely to succeed.—**PUBLISHERS**.—22—3t—m1t.

#### Suffolk Pigs.

**FOR SALE**, 20 pairs of full blood Suffolk Pigs, by **C. J. HOLDEN**.  
Walpole, N. H., May 26, 1853.—m4t

#### Gifford Morgan Colts.

I HAVE two Stallion Colts, both by *Old Gifford Morgan*, viz. One a year old the 15th of July next, a dapple chestnut color—dam by the Geni. Hibard—grand dam by Bullrush. The second three years old 30th of April—color mahogany bay—dam by Green Mountain Morgan, from a Messenger mare. He is a brother to Morgan Chief, owned by Ackley & Gilbert of East Hamilton, N. Y. Both very perfect colts. I will sell either of them. **C. BLODGETT**.  
Waterbury, Vt., May 27—22—lt—m1t.

#### Devon Bull Red Rover for sale.

**RED ROVER** is a full blooded North Devon Bull, bred by Geo. Patterson of Maryland; was sired by his superior imported bull Eclipse. His dam was “Venus,” an imported cow of Geo. Patterson's, sired by Lord Leicester's bull Anensis. Red Rover was calved June 28th, 1844, and has taken the following premiums:

The 1st premium at Poughkeepsie, as the best bull calf.  
The 1st “ at the American Institute the same year.  
The 1st “ as the best 1 yr. old, 2 yr. old, 3 yr. old.  
The 1st “ at the N. Y. State fair in 1847.  
The 1st “ at the Hartford Co. show in 1818.

**THOMAS GOULD**,  
Aurora, Cayuga Co., N. Y.

July 1—m3t.

#### Fancy Lop-Eared Rabbits.



purely bred, can address  
June, 1853—w3t—m3t.

**GEO. P. BURNHAM**,  
Box 22, P. O., Boston, Mass.

#### Super-phosphate of Lime.

THE most approved brands, also Bone Dust, Gunno, Potash Scraps, Poudrette and Plaster. For sale by **LONGETT & GRIFFING**.  
April 21—16—6t

No. 25 Cliff-street, New-York,

#### Books for the Country,

*Sent Free of Postage.*

**C. M. SAXTON**, AGRICULTURAL BOOK PUBLISHER, 152 FULTON-STREET, New-York, publishes the following VALUABLE WORKS:

1. The Complete Farmer and Rural Economist and New American Gardener—by T. J. Fessenden, 2 vols. in 1, about 700 pages, cloth gilt,.....	<b>\$1 25</b>
2. Johnston's Agricultural Chemistry—a new edition, 1 vol 12mo., cloth gilt,.....	<b>1 25</b>
3. Johnston's Elements of Agricultural Chemistry,.....	<b>1 25</b>
4. Johnston's Practical Agriculture—1 vol. cloth,.....	<b>75</b>
do. do. do. paper,.....	<b>50</b>
5. Buist's Family Kitchen Gardener—cloth,.....	<b>75</b>
6. Honre's Treatise on the Cultivation of the Grape Vine on open walls. 50 cents. Paper,.....	<b>40</b>
7. Sheep Husbandry—By H. S. Randall,.....	<b>1 25</b>
8. Stephens' Book of the Farm—complete,.....	<b>4 00</b>
9. Brown's American Poultry Yard—tenth edition,.....	<b>1 00</b>
do. do. do. do. Mail edition,.....	<b>75</b>
10. Allen's American Farm Book—1 vol. <b>\$1</b> . Paper,.....	<b>75</b>
11. Allen's Diseases of Domestic Animals—1 v. 75c. paper,.....	<b>50</b>
12. Chemistry Made Easy for Farmers—paper,.....	<b>25</b>
13. Browne's American Field Book of Manures,.....	<b>1 00</b>
14. Dana's Prize Essay on Manures,.....	<b>25</b>
15. Miner's American Bee-Keeper's Manual,.....	<b>1 00</b>
16. Brown's American Bird Faunier,.....	<b>25</b>
17. The American Architect—the cheapest and best work of the kind published in the world, 2 vols. in 1, bound,.....	<b>6 00</b>
18. Youatt and Martin's Treatise on Cattle—with 100 illustrations. Edited by Ambrose Stevens, Esq.,.....	<b>1 25</b>
19. Youatt on the Breed and Management of Sheep—with illustrations,.....	<b>75</b>
20. Youatt on the Pig,.....	<b>60</b>
21. Richardson on the Hog,.....	<b>25</b>
22. Youatt on the Horse,.....	<b>1 25</b>
23. Richardson on the Horse,.....	<b>25</b>
24. Richardson on the Cow,.....	<b>25</b>
25. The American Rose Culturist,.....	<b>25</b>
26. Allen's Rural Architecture,.....	<b>1 25</b>
27. Allen's Treatise on the Culture of the Grape,.....	<b>1 00</b>
28. Townley on the Honey Bee,.....	<b>50</b>
29. The Hive and the Honey Bee—by Richardson,.....	<b>25</b>
30. The Bee-Keeper's Chart—by Phelps,.....	<b>25</b>
31. Dadd's American Cattle Doctor,.....	<b>1 00</b>
32. The Shepherd's Own Book—by Youatt, Skinner and Randal,.....	<b>2 00</b>
33. Gunn's Domestic Medicine—15th edition,.....	<b>3 00</b>
34. Lindley's Guide to the Orchard,.....	<b>1 25</b>
35. Thomas' American Fruit Culturist,.....	<b>1 25</b>
36. Saxton's Rural Hand Books, 2 vols,.....	<b>2 50</b>
37. The American Florist's Guide,.....	<b>75</b>
38. Fessenden's Complete Farmer,.....	<b>75</b>
39. Fessenden's American Gardener,.....	<b>75</b>
40. Richardson's Pests of the Farm,.....	<b>25</b>
41. Elements of Agriculture—edited by Skinner,.....	<b>25</b>
42. Nash's Progressive Farmer,.....	<b>50</b>
43. Blake's Farmer at Home,.....	<b>1 25</b>
44. Every Lady her own Flower Gardener,.....	<b>25</b>
45. American Kitchen Gardener,.....	<b>25</b>
46. Domestic Fowls,.....	<b>25</b>
47. History of Silk, Cotton, Linen and Wool,.....	<b>2 50</b>
48. Cottage and Farm Bee-keeper,.....	<b>50</b>
49. Quinby's Mysteries of Bee-Keeping—in press,.....	<b>1 00</b>
50. Parks and Garden—by Smith and Allen—in press,.....	<b>1 25</b>

C. M. SAXTON,  
152 Fulton street, New York.

#### Merino Sheep For Sale.

THE subscriber would again call the attention of wool growers to his superior flock of Merino Sheep, which he still continues to breed with care, and without regard to expense where an improvement can be made.

I have now on hand a lot of pure Spanish Merino ewes. A few bucks and ewes, a cross of Spanish and French Merino; and a lot of bucks and ewes, one and two years old, bred from an Atwood buck and the above mentioned ewes.

The above mentioned sheep will be sold on reasonable terms.

I have also on hand a lot ewes, one and two years old, which are grade Merino, produced by careful crossing with the best Merino bucks for the last 14 years. These sheep will be sold cheap.

For the benefit of those coming from the West, I would say, there is a daily stage leaves Amsterdam for this place at 2 o'clock, or on the arrival of the afternoon train from the West.

A. H. AVERY,  
Galway, Saratoga co., N. Y., June 14, 1853.—w&m1t.

## Albany Tile Works,

Corner Patroon and Knox Streets, Albany, N. Y.

**DRAIN TILE** of the following descriptions and prices, suitable for land drainage, always on hand, in large or small quantities, of the first quality, delivered at the Docks and Railroad Depots free of cartage.

## Horse Shoe Tile.

4½ inch calibre, \$18 per 1000 feet.
3½ " " \$15 "
2½ " " \$12 "

## Sole Tile or Pipe.

3 inches calibre, \$18 per 1000 feet.
2 " " \$12 "

Horse Shoe Hand Tile, 8 inches calibre, for drains around dwellings, at \$8 per 100 feet. Sole Tile, 4 inch calibre, for sink drains, at \$4 per 100 feet—9 and 6 inch square, polished face Floor Tile, less than one-fourth the cost of marble, for basement floors and cellar pavements—9 and 6 inch square Bakers' Tile, for oven bottoms. Orders from a distance will receive prompt attention.

A. S. BABCOCK.

Albany, April 14, 1853—16—13t—e6m.

## Important to Wool Growers.

THE subscriber offers to sell Twenty-five pure SPANISH MERINO EWES, and Twenty LAMBS—also Twenty-five lambs bred from Spanish Ewes and a French Buck. The above sheep were not raised from stock that have been peddled for pure bred sheep, but were selected personally, by one of the best farmers of this county, from some of the best flocks in Vermont. Any one wishing to commence a good flock of sheep, will find a rare opportunity, as they will be sold at fair prices.

For any information wanted, address the subscriber at Otisco, Onondaga Co., N. Y. N. H. NOYES.

June 1—21—w2t—m2t.

## Just Published,

STOCKHARDT'S CHEMICAL FIELD LECTURES—For Agriculturists. Edited, with notes, by James E. Tschimacher.

Opinion of Samuel L. Dana, M.D. L.L.D.

The great and striking feature of this little book is, that written by an eminently practical teacher for a class of farmers whose good opinion of the value of science to agriculture was to be won, their experience has been placed above scientific conjecture, and their practical knowledge has been made the point of scientific illustration. Hence the work is more simple and intelligible than any other chemico-agricultural work which has yet appeared.

Devoted chiefly to the practical consideration and money value of manures, its views of vegetable physiology are at once comprehensive, transparent as water, and illuminated by style so bewitchingly simple and concise, that the reader, familiar though he may be with the subject, feels that he is carried onward under the guidance of a master spirit, and as he passes the old landmarks, sees them shining with a new light.

The book has yet to be written whose chapters on artificial manures shall equal Stockhardt's Field Lectures on bone and guano, and certainly no work has yet appeared, which has shed a clearer or milder light on the intimate connection between science and agriculture.

In truth, the great recommendation of this work is, that it is adapted equally to a class of readers who have yet to learn the A B C in agricultural chemistry, and to that other class whose diffusive reading, here finds itself compressed not less neatly than usefully. With regard truly yours,

JOHN BARTLETT.

S. L. DANA.

Just issued, the Sixth Thousand of Stockhardt's Principles of Chemistry.

For SALE—a few sets of Apparatus in a portable form, prepared in Germany, and designed for the student, with or without the aid of a teacher. JOHN BARTLETT,

March 24—12—1t—e.o.m3t.

Cambridge.

## Manures.

PERUVIAN GUANO, 2½ to 3½ cents per pound. BONE DUST, when taken in equal quantities, \$2.25 per barrel.

BONE SAWINGS, separately, \$2.50 per barrel.

PLASTER, \$1 to \$1.25 per barrel.

POTASH, 3½ to 4 cents per pound.

CHARCOAL, \$1 per barrel.

SULPHURIC ACID, 2½ to 3½ cents per pound.

SUPERPHOSPHATE OF LIME, 2½ cents per pound.

WOOD'S RENOVATING SALTS, one cent per pound. For sale at the State Agricultural Warehouse, No. 25 Cliff-street, New-York. LONGETT & GRIFFING.

Feb. 1—etc.

## United States Agricultural Warehouse and Seedstore

No. 197 Water street, near Fulton street, New-York.

MERCHANTS. Planters and Farmers, in want of AGRICULTURAL and HORTICULTURAL IMPLEMENTS or SEEDS, for shipping, plantation, farm or garden purposes, will please call and examine our extensive and superior assortment of goods in the above line, unsurpassed by any other house in the United States, for finish, material and workmanship, and of the most approved patterns; all of which we will sell on as good terms as any other house in this city.

We have among our assortment the far-famed and unequalled EAGLE D. & F. PLOWS, warranted to draw lighter and do as good work in sod or stubble ground, as any other Plow to be found in the United States.

We also have the highest premium Straw Cutters, Fan Mills, Grain Mills, Premium Stalk Cutters, Horse Powers, Threshers and Separators of different kinds; Ketchum's celebrated Mowing Machine, unsurpassed; Hussey's Reaping Machine—also, McCormick's Cotton Gins, Cotton Presses, Hay and Hide Presses, Brick Machines, Harrows of all kinds, Sugar Mills for plantation use, Sugar Mills for grocer's use, Hand Store Trucks of all kinds, Mule Carts, Horse Carts, Farm Wagons, Wheel Barrows, Coal and Canal Barrows. In fact we have everything for shipping or using on plantation, arm or garden.

JOHN MAYHER & CO.  
N. B. Guano, Bone Dust, Poudrette, Superphosphate of Lime, and other fertilizers

Jan 1, 1853—m&amp;wif

## To Flax Growers.

THE subscriber has invented and builds to order, a FLAX MACHINE, which, attended by two hands, is guaranteed to dress from three hundred to four hundred and fifty pounds of flax per day. The saving in labor and tow, by comparison, is considered equivalent to the cost of dressing flax by the best common machinery, used in this country and Europe. The new machine is made with care, to secure strength and durability, and can be run at a speed which requires more than two hands to attend it. Unrotted flax straw can be dressed by it. It can be driven by horse power or otherwise; and, being portable, can be sent any distance. For the present, the price of the machine complete, is \$400. Those who wish to obtain it in season to begin operations next autumn, will do well to apply soon.

S. A. CLEMENS.

Springfield, Mass., March 9, 1853.—mtf.

## India-Rubber Gloves for Gardening,

HOUSE-CLEANING, driving, or any out-of-door work that soils the hands. They are made all lengths, to protect the wrists and arms from exposure, and by wearing, make the hands soft and white. LADIES' BLEACHING MITTS may be worn while sewing or sleeping. LADIES' DRESS PROTECTORS, to prevent the soiling of dresses by perspiration under the arms.

For sale by Bowen & McNamee, New-York; Norcross & Towne, Boston; Wilcox, Billings & Co., Philadelphia; Faileon & Haskill, Baltimore; H. W. Shiffer, Charleston; Gill & Brother, St. Louis; Bart & Hickcox, Cincinnati; and by all Rubber dealers in the Union.

Sold at retail by country merchants generally.

April 12—m3t.\*

## Grey Chittagong Fowls.

PURE blooded Chittagong Fowls and Eggs for sale, by W. BARNES, Bristol, Conn.

April 6—m3t\*

## Books for Farmers.

THE Farmer's Encyclopedia and Dictionary of Rural Affairs, embracing all the most recent discoveries in Agricultural Chemistry, by Cuthbert W. Johnson, Esq. Adapted to the United States by Govener Emerson. One large vol., with plates—\$4.00.

The Progressive Farmer—A Scientific Treatise on Agricultural Chemistry, &c., applied to Practical Agriculture, by J. A. Nash—50 cents.

The American Farm Book, or Compend of American Agriculture, by R. L. Allen—\$1.00.

The American Muck Book, treating of all the principal fertilizers and manures in common use, with specific directions for their preparation, preservation and application to the soil and to crops, by D. J. Browne—\$1.00.

The Farmer's Dictionary—A vocabulary of the technical terms recently introduced into Agriculture and Horticulture, and also a compendium of Practical Agriculture, by D. P. Gardner, M. D.—\$1.50.

Norton's Elements of Scientific Agriculture—50 cents.

The Farmer's Manual—A Practical Treatise on the Nature and Value of Manures, by F. Falkner, Esq.—50 cents.

Johnston's Agricultural Chemistry—\$1.25.

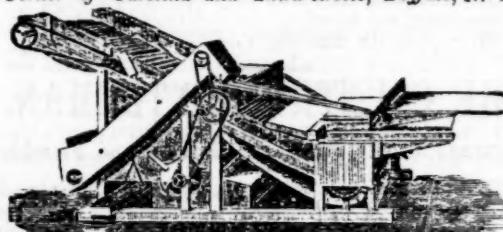
For Sale at the office of the Cultivator, 395 Broadway.

## A Virginia Farm For Sale.

PLEASANTLY situated in Fairfax county, 13 miles from Alexandria, 16 miles from Washington, and about 1½ miles from Lee station, on the Alexandria and Orange railroad, a farm of 212 acres, about one-half interval or bottom land, the residue a gentle swell of upland. It is admirably adapted to grazing, and is well watered with two small streams of never failing water, and is capable of producing excellent crops of corn, wheat, potatoes, grass, &c. The location is healthy, and the markets as good as any in this country. On the premises is a young and thrifty orchard of 125 apple trees, 25 peach trees, pear, cherry trees, &c. Also a timber lot of 20 acres, (hard-wood,) and 50 acres second growth pine, which will yield 40 cords per acre, worth \$2 per cord at the railroad, 1½ miles distant. There is a small dwelling house and other buildings on the farm. The fences are tolerable, 2000 new chestnut rails having been added to the fences within two years. Price \$10 per acre; one half in hand, the balance in two years. Persons desirous of examining the premises, will call upon ANSEL WHEDON, Agent, near Lee station. For further information, address

A. & O. WHEDON.  
West Pawlet, Vt.

March 18—w2—mtf.  
Agricultural Implement Manufactory,  
Corner of Carolina and Third-streets, Buffalo, N. Y.



PITTS' PATENT SEPARATOR—IMPROVED DOUBLE PINION HORSE POWER—PITTS' CORN AND COB MILL, &c.

I HEREBY give notice, that since the extension of the Patent right on my machinery for Threshing and cleaning grain, I have removed to Buffalo, N. Y., where I have permanently located, and erected a large establishment for the future manufacture of the above machines.

The Separator has been enlarged, improved, and rendered more permanent and durable in all its parts—while the Horse Power, for strength, ease, durability, and cheapness of repair, is not surpassed by any in the United States. This Power is warranted to stand the full strength of eight horses, also to give as much effective or useful power when driven by one or two horses, as any other Horse Power, whether constructed on the endless chain or lever principle.

It was put on trial at the great exhibition of Horse Powers and Threshing Machines, at Geneva, in July last, 1852, where it received the New-York State Agricultural Society's first premium "for the best Horse Power for general purposes."

The Separator, at the same trial, also received the Society's first premium. My machines will thresh and clean from three to five hundred bushels of wheat per day, and other grain in proportion.

Two hundred of the above machines are for sale at the Agricultural Works of the subscriber, in this city, all warranted to be a better article than can be purchased at any other shop, and if they do not prove on trial to be so, I will take them off the hands of the purchasers, at the price they may pay me for them.

I further notify all persons, who are purchasing Horse Powers and Separators to be used in California or Oregon, that I will hold them accountable for any infringement of the rights secured to me by letters patent in the above machines, as I am manufacturing a Horse Power and Separator expressly designed for that section.

All orders for the above machines, hereafter, addressed to the subscriber, will receive prompt attention.

JOHN A. PITTS, Buffalo, N. Y.

April 14—16—1am—c6m

## Super-phosphate of Lime.

IN bags and barrels made by C. B. DeBurgh, a warranted pure and genuine article, for sale by

GEO. DAVENPORT,  
No. 5 Commercial, corner of Chauncy-st., Boston,  
Agent for the manufacturer, with directions for use.  
Also, for sale. Ground Bone, Bone Dust, Burnt Bone, Guano, and Grass Seeds of reliable quality.

April 7—14—11—mtf.

THE Transactions of the New-York State Agricultural Society, vols. 1 to 9, for sale at the Office of "THE CULTIVATOR," price \$1 per vol.

## Agricultural Implements.

STRAW AND STALK CUTTERS—of all patterns.  
CORN MILLS—both of Iron and Burr Stone.

CORN AND COB CRUSHERS—of Beals', Nichols' and Sinclair's make.

ROAD SCRAPERS—of several patterns.

FANNING MILLS—of all the best makers.

SAUSAGE STUFFERS AND CUTTERS—of all patterns.

VEGETABLE OR ROOT CUTTERS—of approved kinds.

CORN SHELLERS—for hand and horse power.

VEGETABLE BOILERS—of Mott's and Bent's patterns.

GARDEN AND WHEEL BARROWS—of iron and wood.

HAY AND COTTON PRESSES—Bullock's patent.

BRICK MACHINES—of Hall's and other makers.

WAGONS AND CARTS.

PLOWS—of Prouty & Mears, Centre Draft, and Rich's Iron Beam PLOWS—Eagle, Massachusetts make, and Minor & Hortons.

For sale at the State Agricultural Warehouse, No. 25 Cliff Street, New-York.

Nov. 1—tf.

## Imported Horse Consternation.

THIS thorough bred horse has been exhibited repeatedly at the Fairs of the New-York State Agricultural Society, and by the unanimous voice of every committee that has viewed him, has been pronounced the best thorough bred horse that ever passed under their inspection. His pedigree will be found complete in Derby & Miller's edition of Youatt, and can be confirmed in every particular by reference to breeder's certificates, the English racing calendar, and English Stud Book now in possession of his owner.

His stock has been proved in Oneida county, where some of his colts are four and five years old—and any person may be satisfied of their great superiority by inquiring of almost any farmer, or horseman in Rome, Lee, or Western.

He will stand the coming season, as heretofore, at the farm of the subscriber, two miles west of Syracuse, and adjoining the village of Geddes.

TERMS—Ten dollars the season, and fifteen dollars to insure. The money to be paid in advance in all cases. When a mare is insured and left at the farm, or regularly returned to the horse until the groom is satisfied that she is in foal, a receipt will be given, promising to refund the money in case the mare was not in foal.

Pasturage furnished at three shillings per week. All mares at the risk of the owner in all respects. J. B. BURNET.

Syracuse, May 1, 1853—m3t.

Full Blooded English Draught Horse,  
SAMSON 2nd,

WILL stand this season at the residence of the subscriber, [known as the Shotwell Farm] between Aurora and Lavanna, Cayuga Co., N. Y.

Samson 2d was sired by my Imported Draught Horse, "Old Samson," out of my full blooded Mare "Meg," "Meg" by same horse, out of my Imported Mare, "Margaret."

This valuable young Horse is the only one in the United States, that has more than half of the Original Samson Blood. He is a good dark bay color, with black legs; about 16 hands high; very compact, and possesses immense muscular power; is kind and free worker; was six years old last summer, and weighs 1,555 lbs.

Terms, \$8.00 to ensure a Mare with foal, payable on the first March next. Mares to be regularly returned; accidents at risk of owners.

JOHN ROBINSON.

Lavanna, April 28, 1853—17—11—m2t\*

## The Original Black Hawk.

THIS celebrated horse will stand this season at the stable of the subscriber, in Bridport, Addison County, Vermont.

To the Patrons of Black Hawk.—It is proposed by the owner, that the horse shall serve fifty mares this season—and those who would like to secure the services of the horse, will please send to the agent their names, (by letter or otherwise,) as those sending first, will be first served.

Good keeping will be provided for mares from a distance—and all accidents, escapes and thefts, will be at the risk of the owner.

N. B.—Terms for the use of said horse will be, for the season, \$50, payable in cash or satisfactory notes on demand, with interest; and all demands for past services of Black Hawk and Post Boy Morgan, must be immediately paid to David Hill, who is alone authorised to settle the same.

DAVID HILL, Agent.  
Bridport, Addison Co., Vt., May 1, 1853—3t.

## Contents of this Number.

Diffusion of Agricultural Information, . . . . .	201
Value of Guano, . . . . .	202
Agricultural Chemistry, by JOHN JOHNSTON—Treatment of Peat Swamps, by A SUBSCRIBER, . . . . .	203
Large Root Crops—Culture of Indian Corn, by W.M. TOWN, . . . . .	204
Seed for large Crops of Oats, by J. W. COLEBURN—Nitrogen in Plants, by W.M. H. BREWER, . . . . .	205
Making and Saving Manure, by SAMUEL F. WEST—Investment in Weeds, . . . . .	206
To Clean Chess out of Wheat, by JOHN JOHNSTON, . . . . .	207
Scenery and Agriculture of Albany County, . . . . .	208
Couch Grass—Sheep Shearing Festival, . . . . .	209
Cost of Ruta Bagas, . . . . .	210
Caterpillars in August, by S. B. BUCKLEY—Patent Bee Hives—Manure for Roses, . . . . .	211
Our Country Churches, . . . . .	212
Management of Cream, by H. T. RICHMOND—Turnips and Milk, by W. F. SANDS—Manufacture of Cheese, . . . . .	213
Profitable Cow, . . . . .	215
Mulching—Thinning out Vegetables, . . . . .	216
Insect Repellers—Sulphur and Mercury—Destroying Black Ants—The Narrowed Gardens in Cities, . . . . .	217
The Kitchen Garden, by B. M.—Remedy for the Cherry Slug, by A. S. MOSS—Preparing Soil for Grapes, . . . . .	218
Garden and Fire Engine—Remedy for Black Knot on Plum Trees, by F. JACOBS, M. D.—Cure for Rose Bugs, . . . . .	219
Points of Excellence in Cattle, . . . . .	220
Training Steers, by W. B., . . . . .	221
Docking Lambs, by S. W. JEWETT—To Stop a Run-away Horse—Charcoal and Salt for Sheep—Management of Poultry, . . . . .	222
Currant Wine—Green Ointment—To make Pure White Soap, . . . . .	223
Notes for the Month, . . . . .	224
Answers to Inquiries, . . . . .	227
Information wanted—Ag Societies, . . . . .	228
ILLUSTRATIONS.	
Country Church, . . . . .	212
French Merino Sheep, . . . . .	221
Garden and Fire Engine, 219	
West Highland Bull, . . . . .	222

## Agricultural Botany.

A N enumeration and description of the useful Plants and Weeds which merit the notice, or require the attention of American Agriculturists, by W.M. DARLINGTON, M. D. This volume contains 328 closely printed pages, with a copious glossary of Botanical terms, and an index of common names. It describes the plants yielding food for man and animals; yielding condiments and drinks; medicinal plants; plants employed in the arts and rural economy; pernicious and troublesome plants, and mere weeds—nearly 500 in all. A bound copy will be sent by mail, free of postage, to any one remitting one dollar to E. C. DARLINGTON, Lancaster, Pa.

July 1—11\*

## Horse Powers, &amp;c.

E. W. BADGER & Co. Manufacturers of Badger's Patent Horse Powers, Threshing Machines & Separators, Circular and Cross Cut Saws, &c., Fly Creek, Otsego County, N. Y.

## List of Prices, 1853.

Two horse Power, Thresher, Separator, Bands, &c.,	\$145
One horse do do do do, . . .	120
Circular Saw Mill, . . . . .	35
Cross Cut do . . . . .	25
Thresher, . . . . .	25
Separator, . . . . .	10

All articles warranted. For further particulars address E. W. Badger & Co., Fly Creek, Otsego Co., N. Y.  
July 1—wlt—mlt\*

## DEVON COWS,

HEIFERS, and Bu'l Calves—pure blood—for sale by Feb. 1—mly. B. V. FRENCH, Braintree, Mass.

## New-York Agricultural Warehouse.

PERUVIAN GUANO—Just received per ship *Grecian*, first quality Peruvian Guano. No. 1 Super-phosphate of Lime constantly on hand; also, Agricultural and Horticultural Implements, and Field and Garden Seeds—the largest and most complete assortment to be found in the United States. R. L. ALLEN, Nos. 189 & 191 Water-st., New-York.

May 19—w—20, 23, 26, 27—m2.

THE COUNTRY GENTLEMAN has successfully completed the first six months of its history, and is no longer an experiment. We are assured that it has made many friends, and have received many kind words of encouragement from subscribers in all parts of the Union. As the entire numbers for a year make a volume too bulky for convenient reference, we have concluded to issue it in two volumes a year. The first volume was completed with the last week in June, and was accompanied with a Title Page and Index.

THE SECOND VOLUME commences with the first week in July, and we solicit for it the earnest efforts of our friends. Subscriptions will be received for six months, and those commencing with July will have a perfect volume, with title page and index, at the close of the year. We ask particular attention to the following:—

TERMS.—*Payable in advance.*

One copy, one year, . . . . .	\$2 00
Three copies, one year, . . . . .	5 00
One copy, six months, . . . . .	1 00
Six copies, six months, . . . . .	5 00

## THE COUNTRY GENTLEMAN.

## A Journal for the Farm, the Garden, and Fireside.

THE COUNTRY GENTLEMAN has a four-fold purpose.—1. To promote the interests of the FARMER, by furnishing him the most approved method of cultivating all his crops and of keeping his farm in a continually improving condition, together with the best mode of breeding and rearing all the Domestic Animals. The Farm Department is intended to be a reliable record of the present state of Agriculture in all parts of the world, and to contain suggestions for Farm management and economy.—2. To be a complete manual for the GARDENER and FRUIT GROWER, and to give safe and specific directions for the culture of GARDEN VEGETABLES, and also information with regard to the FLOWERS, SHRUBS, and ORNAMENTAL PLANTS, suited to the various sections of the country.—3. To supply the FIRESIDE with a variety of instructive and entertaining reading of a high order, and yet suited to the capacity of every reader, to awaken a desire for knowledge and to cultivate a taste for HOME IMPROVEMENT and a love for HOME VIRTUES.—4. To present a careful, concise and impartial RECORD OF THE TIMES, containing all the important events of the day and signs of the times, and thus to lay before country residents a brief and connected history of all the leading movements in the Social, Educational and Political World. In connection with this department, a weekly synopsis of the PRODUCE MARKET, compiled expressly for the paper by a gentleman thorough'y versed in the business, will be given, which will be invaluable to every farmer who has produce to sell.

It will be the aim of the publisher to make the paper attractive and elegant in its typography and illustrations, choice and select in its contents—to make it indispensable to the Farmer, and desirable to every one who has a rod of ground cultivate, or a home to beautify—and by devoting its columns to IMPROVEMENT IN AGRICULTURE, ELEVATION IN CHARACTER, AND REFINEMENT IN TASTE, to render the COUNTRY GENTLEMAN the standard in its sphere.

TERMS.—The Country Gentleman is printed in quarto form, on Thursday of each week, each number consisting of sixteen pages, and forming two annual volumes suitable for binding, of 416 pages each, at Two DOLLARS per year when paid in advance, or \$2 50 if not paid in advance.

Those wishing to subscribe, will please forward Two DOLLARS to LUTHER TUCKER, Publisher, Albany, N. Y. Specimens sent to all post-paid applications.

## THE CULTIVATOR:

A MONTHLY JOURNAL OF Agriculture, Horticulture, and Domestic Economy.

## THE PRICE REDUCED TO 50 CENTS A YEAR.

All subscriptions must commence with the January No., and the payments must in all cases accompany the order for the paper.

LUTHER TUCKER,

Publisher, Albany, N. Y.